

COUNTWAY LIBRARY



HC 3186 V

BOSTON
MEDICAL LIBRARY
8 THE FENWAY



Digitized by the Internet Archive
in 2016

<https://archive.org/details/journal2219miss>

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Component Societies
Issued Monthly Under Direction of the Publication Committee

PUBLICATION COMMITTEE

W. H. BREUER, *Chairman* C. B. FRANCISCO, M.D.
M. A. BLISS, M.D.

E. J. GOODWIN, M.D., *Editor*
OFFICE OF PUBLICATION, 901 Missouri Building, St. Louis, Mo.

INDEX TO VOLUME XXII

JANUARY, 1925, TO DECEMBER, 1925



THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies
Issued Monthly under direction of the Publication Committee

VOLUME XXII

JANUARY, 1925

NUMBER I

E. J. GOODWIN, M. D., EDITOR
901 Missouri Theatre Building, St. Louis, Mo.

PUBLICATION COMMITTEE
W. H. BREUER, M. D., Chairman
C. B. FRANCISCO, M. D.
M. A. BLISS, M. D.

ORIGINAL ARTICLES

THE VALUE OF ENDOSCOPY TO THE INTERNIST*

BERNARD J. McMAHON, M.D.

ST. LOUIS

As our knowledge of disease conditions of the respiratory and alimentary tracts increases the science of endoscopy assumes a role of greater and greater importance as a distinct adjunct to more accurate diagnoses of these conditions. Too often this important function of the endoscopist is lost sight of, either because the profession has not yet become accustomed to think in terms of peroral endoscopy or because the procedure is scouted, on the ground that it is too dangerous or extreme to be justifiable as a routine measure. As regards the danger involved, in the hands of the properly trained and reasonably skilled who have full cognizance of the few major contraindications, it is practically nil. As for the extremity of the measure, the most accurate way of judging this is to contrast the very slight inconvenience to the patient with the invaluable information obtained.

In order properly to orient ourselves, permit me to refresh your minds in regard to a few of the instruments used and a few of the primary principles of endoscopy. The methods and instruments are those which have been perfected by Dr. Chevalier Jackson, of Philadelphia. (Figs. 1, 2. Also footnote 1.) Dr Jackson defines "direct laryngoscopy, bronchoscopy, esophagoscopy and gastroscopy" as "procedures in which the lower air and food passages are inspected and treated by the aid of electrically lighted tubes, which serve as specula to manipulate obstructing tissues out of the way and to bring others into the line

of direct vision." In general, the purposes are, (1) exploratory or diagnostic; (2) to

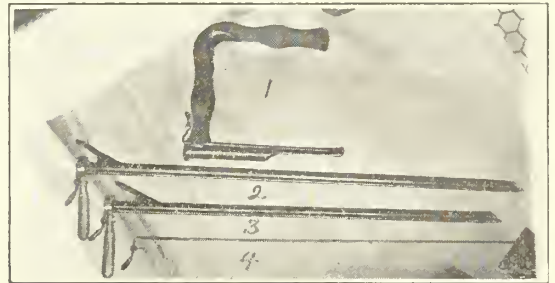


Fig. 1. 1. Adult laryngoscope. 2. Adult esophagoscope. 3. Adult bronchoscope. 4. Light carrier, type used in 2 and 3 above.

obtain tissue for microscopic examination; (3) to administer treatment; (4) to extract foreign bodies.

The majority of cases are done under no anesthesia at all or under local anesthesia by applying to the mucous membrane of the hypopharynx and larynx a limited amount of weak cocaine solution. The few cases calling for general anesthesia are done under ether.

The most significant way to bring home to you this interdependence of the endoscopist and the internist is by a sequence of illustrations, touching upon the most striking disease conditions which form that vital borderline of endoscopy and internal medicine.

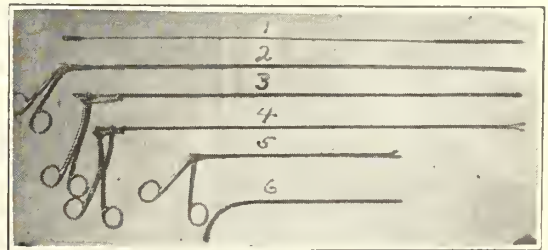


Fig. 2. 1. Sponge holder, open. 2. Esophageal specimen forceps. 3. Bronchial dilator, self-expanding, closed. 4. Bronchial dilator, self-expanding, open. 5. Laryngeal specimen forceps. 6. Laryngeal aspirator.

LARYNX

The larynx first claims our attention as being secondarily affected in cases of compressions of the recurrent laryngeal nerves, ac-

*Read before the sections of the American Congress on Internal Medicine, St John's Hospital, St. Louis, February 19-22, 1924.

NOTE 1. The illustrations marked with an asterisk and the quotations are from Dr. Jackson's book, "Peroral Endoscopy and Laryngeal Surgery," and from his article, "Suppurative Diseases of the Lung; Bronchoscopic Drainage as an Aid to Treatment by the Internist," appearing in the Transactions of the American Academy of Ophthalmology and Otolaryngology, 1923 (by special permission of the author). The remaining illustrations are from our Bronchoscopic Service at the St. Louis City Hospital and the Engelbach Clinic.

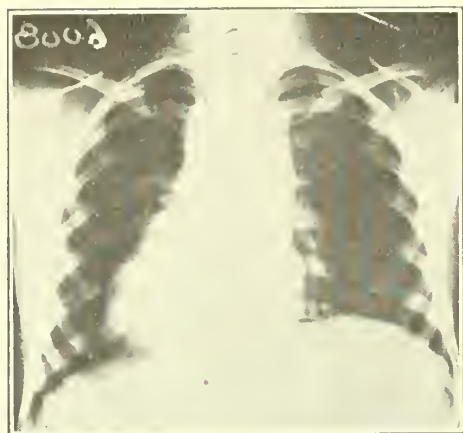


Fig. 3. Enlarged thymus, causing pressure symptoms upon trachea.

companying enlargements of the thyroid gland, lymph adenopathy, tumors, or aneurysms within the mediastinum. (Figs. 3, 4.) To determine most accurately the degree of immobilization of the cords we turn to direct laryngoscopy to supplement the indirect examination of the larynx. In obstructions of the larynx of whatever nature, whether due to papillomata or benign or malignant neoplasms, the endoscopic examination, either for biopsy or for complete removal, is indicated. The direct dilatation of stenotic larynges following trauma of any kind, including post-tracheotomic stenosis as the result of prolonged wearing of tracheotomy tubes in high tracheotomy, is most efficacious.



Fig. 4. Substernal thyroid, causing partial obstruction of esophagus and partial recurrent paralysis, both subsequently relieved by thyroidectomy.

TRACHEA

In dyspneas, except pneumonic, the trachea and the bronchi should be examined for the presence of an obstructing foreign body or for constrictions due to external pressure within the mediastinum. It is frequently possible to



Fig. 7. Illustration of a positive film used for overlaying to assist in localization of foreign bodies or lesions in the thorax. The lower white line (D, D) corresponds to the diaphragm, the middle line (P, P) to the dome of the pleura. These lines assist in placing the overlay. The upper line (V, V), corresponding to the vocal cords, is occasionally useful. Twelve photographic enlargements are on hand so that a film of the size (rather than the age) is available for any sized patient. The few minute branches that go below the line D, are those posterior to the apex of the dome.

pipe the air past the obstruction by means of a prolonged tracheotomy tube or tracheal cannula.

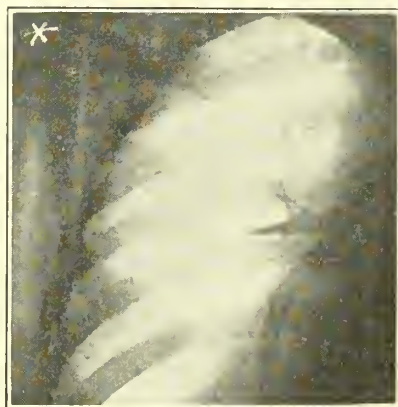


Fig. 8. Roentgenogram showing the author's method of bronchial mapping or lung-mapping by the bronchoscopic introduction of opaque substances (in this instance powdered bismuth subnitrate) into the lung of the patient. Plate made by David R. Bowen. (Illustration, strengthened for reproduction, is from author's article in *American Journal of Roentgenology*, Oct., 1918.)

LUNGS

In hemoptysis of nontuberculous origin the bleeding spot can be quickly localized and hemostasis applied directly and unfailingly. Bronchiectasis and lung abscess should always be given the benefit of bronchoscopic treatment in order that obstructing granulations

may be removed, the secretions aspirated, the cavity irrigated if accessible, and curative medication injected directly into the seat of the abscess. (Figs. 7, 8.) Even though the abscess be situated far to the periphery the discharging bronchus can be located and such



Fig. 9. Roentgenogram of chest of woman, aged 27 years, Pulmonary abscess of right upper lobe. Severe cough with profuse foul expectoration began 8 days after cholecystotomy under ether anesthesia. Intermittent productive coughing paroxysms. Bronchoscopic treatment began six months after onset of suppuration. In the lower portion of the upper lobe, there is seen a large area of exudate which is not adequately drained. Arrows surround the cavity.

pathology as is always at the ostium can be treated in order to open up the lumen and allow freer drainage. (Figs. 9, 10.) Should a stricture be found it can be dilated. In



Fig. 10. Roentgenogram of some patient as shown in Fig. 9, made after fifth weekly bronchoscopic treatment. This plate shows only a very small amount of exudate in the parenchymal portion of the right upper lobe along the interlobar pleura. The abscess cavity is well drained. At last bronchoscopy, after 17 bronchoscopies, the bronchi were found to be free from pus. Physical examination of chest revealed nothing abnormal. Patient treated by Drs. R. M. Lukens and W. F. Moore at the Bronchoscopic Clinic, Department of Diseases of the Chest, Jefferson Hospital.

idiopathic lung abscesses there is always a strong possibility of a foreign body, especially organic, as the cause, and it should always be sought for by the bronchoscopist, since the X-ray is usually unavailing. (Fig. 13.) Very brilliant results have been achieved in the cure of this type of abscess following the removal

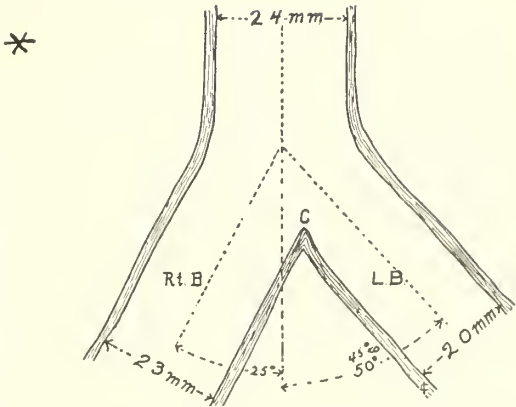


Fig. 13. Schema showing three anatomical reasons for the greater frequency of right-sided lodgement of foreign bodies in the bronchi. The right bronchus (Rt. B.) is almost as wide (23 mm.) as the trachea (24 mm.) and it deviates much less than the left from the long axis of the trachea. The carina, C, is to the left of this axis. (After Sir St. Clair Thomson.)

of the offending particle. When vaccine therapy is used a pure culture of the infecting organisms can be obtained, free from the contaminating oral bacteria, for the preparation of an autogenous vaccine.

PULMONARY TUBERCULOSIS

While bronchoscopy is not usually indicated in the frank cases of pulmonary tuberculosis, it often serves a most useful purpose in that we can aspirate impacted caseous material from the bronchi and thus establish the necessary drainage of a distal focus from which the patient is absorbing an unnecessarily large amount of toxins, superinduced by pent up secretions. And also, we may be able to help overcome the secondary infection of the tuberculous cavity, which is undoubtedly contribut-

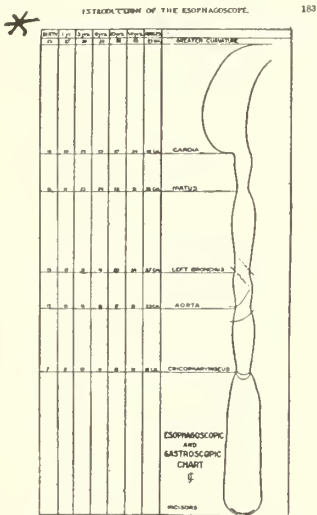


Fig. 15. The author's esophagoscopic chart of approximate distances of the esophageal narrowings from the upper incisors, prepared by the author from measurements in the living. Arranged for convenient reference during esophagoscopy in the dorsally recumbent patient.

ESOPHAGUS AND STOMACH



Fig. 16. Filling defect in esophagus, resulting from spastic condition as a consequence of carcinoma of esophagus, before esophagoscopy.

ing to the localized lowered resistance and facilitating the invasiveness into healthy lung tissue of the tubercle bacilli. This particular phase of bronchoscopic therapy offers a promising and as yet unexplored field for further investigation.

By pleuroscopy old resistant adhesions may be localized and severed in order to release a lung for a pneumothorax.



Fig. 17. Same patient three days after esophagoscopy, spasm having been overcome by simple passing of esophagoscope.

In considering condition of the esophagus which give rise to the clinical symptoms of inability to swallow solids or liquids, either partially or entirely, or inability to retain such in the stomach, we turn to the X-ray for a certain amount of information, but to endoscopy for the remainder and at times the most important. (Fig. 15.)

In esophagismus the exact area of spasticity may be localized and the mucosa carefully scrutinized for ulcerations which may be activating the reflex spasm, the degree of spasm being gauged by the passing of the esophagoscope. Frequently this simple dilatation will be sufficient to overcome the condition. (Figs. 16, 17.) On the other hand, a relaxed hiatus with regurgitation may be found in a condition of supposed persistent vomiting.

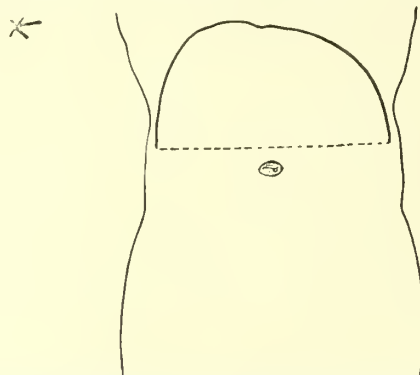


Fig. 18. Illustrating the anatomical reasons for the wide range of mobility of the gastroscope in the stomach. If the diaphragm were a plane or tightly stretched membrane as represented by the dotted line a gastroscope in the hiatus could not be moved laterally. The dome shape permits of a wide lateral range of movement because of redundancy, provided the diaphragmatic musculature is relaxed by deep anesthesia.

The mucosa of the stomach likewise can be inspected, at least in the left two-thirds, for an irritative lesion as the cause of the esophagismus. (Fig. 18.) Other reflex causes are laryngeal irritation and endocrin imbalance, which may be pointed to, to a great extent, by negative esophageal findings. The dilations of the esophagus which are primarily due to obstructions or stenoses of the lower segment may be aggravated and prolonged by secondary mucosal inflammation. (Fig. 20.) The extent of this inflammation can be determined and its course of healing watched only by esophagoscopy.

Passing on from the spastic conditions causing esophageal impassability, we next come to the obstructive factors, which may occur murally, intramurally, or extramurally. In considering the mural conditions, the information which may be obtained by direct examina-

tion is invaluable. We may know that there is a lesion in the esophagus, but we should not be satisfied until we have ascertained by direct inspection the exact type of lesion, its extent, and its progress in response to adequate therapeutic measures. We may also determine the character of strictural conditions accompanying malignancy or following burns, healed ulcerations, or trauma, and pursue the subsequent necessary bouginage under the guidance of the trained eye as well as the finger. The direct application of radium to the area of malignancy by the endoscopic placing of a capsule has been most satisfactorily accomplished.

Of the intramural conditions, we may find an impacted foreign body or a congenital imperforate esophagus.

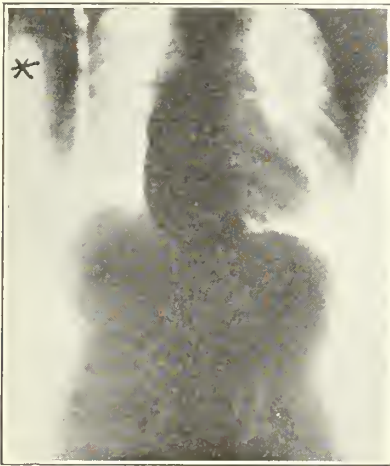


Fig. 20. Radiograph of a woman of 45, showing an abdominal esophagismus which was afterward cured by endoscopic mechanical divulsion. The "flat floor" of the dilatation shows why previously used blind methods had failed to introduce any instrument through the hiatus.

Diverticuli while of mural origin may exert their chief detrimental effect from an extramural source in that they may cause compression of the posterior esophageal wall when sufficiently dilated. (Fig. 23.) We then turn to the endoscopist to determine the location and the size of the ostium and the amount of secondary pathology being caused by the pressure of the sac upon the esophagus, as well as to determine the presence or absence of a fistula. He can also be of aid in localizing an esophago-tracheal fistula and in observing its response to treatment.

The foregoing function of the endoscopist likewise applies to all extramural mechanical intrathoracic factors causing esophageal obstruction, such as mediastinal adenopathy, enlarged thymus, substernal thyroid, aneurysm, malignancy, lordosis, enlargement of the left



Fig. 23. Radiograph of a woman of thirty-eight years. The shadow which so much resembles a diverticulum was esophagoscopically proven to be a dilation above a stricture, of probably luetic origin. The stricture is behind and above the bottom of the lower border of the shadow of the dilatation. Endoscopic dilatation resulted in a cure, after which a bismuth mixture went through into the stomach so promptly as not to show in a radiograph. Fluoroscopic examination showed the swallowing to be normal.

hepatic lobe, or abnormal pressure of the left bronchus as it crosses the esophagus. (Figs. 24, 25, 26.) Unexplained radiographic shadows are likewise frequently cleared up by an esophagoscopy. (Fig. 27.)

In an earlier paragraph I mentioned the fact that there are contraindications to endoscopy, and it behooves us not to let our enthusiasm submerge these all-important considerations. A bronchoscopy should never be performed in cases of advanced aneurysm, high blood-pressure, recent pulmonary hemorrhage, advanced heart disease, or frank pulmonary tuberculosis. Nor should an esophagoscopy be performed in



Fig. 24. Cross section at the level of the upper part of the seventh cervical vertebra.

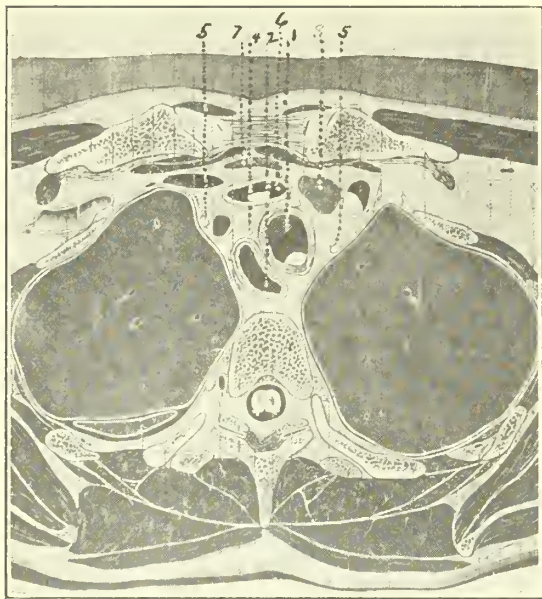


Fig. 25. Cross section at the level of the second thoracic disc and the upper part of the third thoracic vertebra, and through the jugular notch anteriorly.

aneurysm, advanced organic disease, extensive esophageal varicosities, acute necrotic or corrosive esophagitis, or water starvation following an esophageal obstruction.

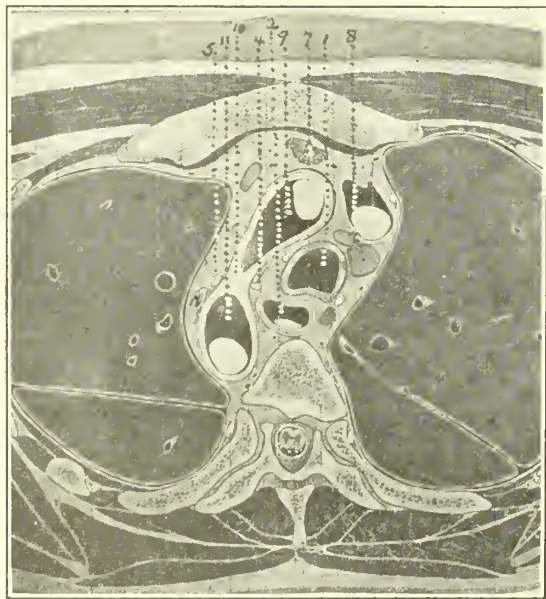


Fig. 26. Cross section through the middle of the fourth thoracic vertebra and through the middle of the manubrium anteriorly. These cross sections show the intimate relationship of the cervical and mediastinal structures, so important in compression of the recurrent laryngeal nerve and compressions and stenoses of the trachea and esophagus.

1. Trachea. 2. Esophagus. 3. Thyroid gland. 4. Recurrent laryngeal nerve. 5. Vagus. 6. Innominate artery. 7. Thymus gland. 8. Mediastinal lymph gland. 9. Ascending aorta. 10. Arch of aorta. 11. Descending aorta. (Figs. 24, 25 and 26 are from "Cross Section Anatomy," by Eycleshymer and Shoemaker. By permission of the publishers, D. Appleton & Company, New York.)

There is only one exception to the contraindications, and that is the presence of a foreign body.

In a recent publication Dr. Jackson says: "It would, however, be a most unfortunate error if bronchoscopy, for either diagnosis or treatment, were undertaken by anyone as an independent procedure. These procedures can accomplish their greatest usefulness only when carried out under the observation and guidance of the internist, whose broad viewpoint will determine the suitability of the case by eliminating those in which external surgery or medical care alone is needed."

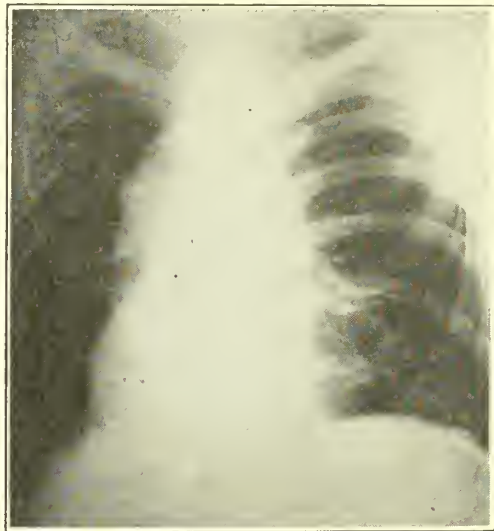


Fig. 27. Aneurysm of the aortic arch, with obstruction of the esophagus.

SUMMARY

Endoscopy may be of distinct value to the internist, (1) in confirming and rendering more accurate his diagnoses of certain conditions of the respiratory and esophago-gastric tracts; (2) in gauging the progress of his general treatment by its effect upon local conditions in these tracts; (3) in treating local lesions and strictures directly under the guidance of the skilled eye as well as the hand, as contrasted with blind methods only; (4) in removing foreign bodies from the respiratory and esophago-gastric tracts.

607 North Grand Ave.

PELLAGRA WITH REPORT OF CASE

E. C. ROBICHAUX, M.D.

EXCELSIOR SPRINGS, MO.

A recent experience with a clearly defined case of pellagra occurring in the Middle-West under rather unique circumstances, has furnished the incentive for the preparation of this paper.

The purpose of it is not to burden an already voluminous literature on the subject; it is to call attention to the essential features of pellagra in as clear, concise, and usable manner as possible, with the view of stimulating greater interest in its recognition. Although it is seldom encountered in private practice, except sporadically, there is good reason to suspect that borderline cases exist everywhere, needing the characteristic cutaneous lesions to label them.

It is interesting to note that scientific attention was directed to pellagra as far back as 1735 in unpublished observations by Gaspal Casal, of Spain. Its more recent recognition followed reports of Geo. H. Searcy of Mt. Vernon (Ala.) Insane Hospital. (1906). Soon thereafter, cases were reported from all sections of the Southland and by 1909 twenty-six states in the Union had reported its presence.

True enough, the larger number of these cases occurred in asylums, orphanages, and penal institutions; the remainder were among the farm laboring element of the South, around the sawmill camps and the like.

Why the South had to bear the brunt of this stigma is explained by the conditions which then prevailed in that country. Lands were divided, in most part, into large plantations of thousands of acres, cities were far apart, roads were almost impassable to market because of the usual excessive rainfall. Dependence had to be placed almost entirely upon the plantation store. It carried a meagre line of food-stuffs but an abundance of liquor. The final analysis was that the common laborer on the farm and about sawmill camps converted his all too little income into drink, salt meat, corn-bread, rice, and molasses to the detriment of his health and that of his family.

It was observed further that, wherever men and women were housed together under conditions which made their dietary not of their own choosing, there pellagra was likely to be found. In other words, ordinarily speaking, man instinctively selects a diet contrary to the possible development of pellagra.

Attempts were made to prove the transmissibility of pellagra; later the infectiousness of it; others again attempted to fix the blame on certain conditions found in corn until nearly the gamut of disease producing agencies was called into action to explain the origin of this peculiar symptom-complex.

Until this time and for a long while thereafter, the "Spoiled Corn Theory" of Lombroso held the attention and faith of the profession and upon this was based all prophyl-

lactic measures adopted by the Italian and Austrian governments for its eradication. He attributed the condition of pellagra to "certain bacteria or molds found in corn."

Another investigator, with less desire for specificity, said, "that it was due to some toxic substance in corn."

These ideas were later found to be untenable, as many cases developed in which corn constituted no part in the diet; and, furthermore, its transmissibility was not possible nor in any way affected by any specific infectious process because of the invariable absence of



Fig. 1. Pellagra. Showing characteristic erythematous eruption, with pigmentations and papulations.

the disease among the nurses, administrators, and higher-ups of the institutions wherein pellagra was found.

The theoretic confusion abated only when the U. S. Public Health Service, under the able direction of Goldberger¹ and his associates, undertook elaborate investigations to solve the problem.

Diet lists of orphanages, asylums and prisons were thoroughly studied and the conclusions arrived at were that, in those institutions where cereal consumption was disproportionately large to that of proteins pellagra was sure to be found in greater numbers.

Under their direction this test, among many, was made: A fixed number of inmates, of apparently physiological equality, was selected. To a certain number of them was given a diet rich in corn-bread, biscuits, cereals, rice, and molasses. Only occasionally, smaller amounts of sweet potatoes and turnips were given. Careful exclusion was made of meats, cheese, eggs, butter, and milk. They reported six out of eleven of these developed pellagra in less than six months. To those given the contrariwise diet, good health continued throughout the experiments. Furthermore, and for the purposes of greater elucidation, they demon-



Fig. 2. Showing marked distribution of erythema on face and neck.

strated upon the former group a rapid restoration of health with the resumption of a normal well-balanced dietary regime.

These determinations, however incomplete of the total solution of the problem, served to focus a concentrated attention upon the theory of faulty nutrition in pellagra and more especially on the deficiency of the protein element in the diet.

In a later contribution, Goldberger¹ maintained that, of proteins, forty grams daily would be sufficient to prevent the development of pellagra. Moreover, he declares that the specific deficiency rested in certain unde-

termined amino acids in the protein molecule. He was not alone in attempting to extract that fundamental element in the causation of pellagra.

But, after all, in whatever manner the facts are twisted, no one has reported a case of pellagra in the presence of a full and well balanced dietary. Even the World War furnishes contradictory situations in relation to pellagra, for it is said, despite the positive presence of extreme deprivation, particularly in the armies of Russia and Germany, as typified by war edema, little was seen of pellagra. Was it because animal flesh was probably the easiest obtainable food in the army and, if so, the protein deficiency theory enunciated by Goldberger holds true?

Then comes Hinhede² who writes, after studying the system of rationing food in Denmark during the period of the War, that pellagra is not due to deficiency in animal protein but rather to deficiencies in certain vitamins found in vegetables, fruits, and cereals. Can any one visualize the armies of the World War, and more particularly of Germany and Russia, being supplied with fruits and vegetables in a manner to account for the relative absence of pellagra?

Shattuck³, although admitting the significant effects of diet on pellagra, cannot help to notice the close association between chronic alcoholism and pellagra. He reports that, out of his one hundred and thirty-two cases, fifty-two were males and of that number more than a third were alcoholic.

Our case bears out this association and definitely places it just where it belongs, namely, in the light of a contributory factor and not an etiological cause; for we cannot fail to realize the deleterious effects of chronic alcoholism upon the gastro-intestinal function, including the liver and later the nervous system, which in turn must affect the delicate mechanism having to do with metabolism.

SYMPTOMS

There is but one pathognomonic symptom of pellagra, i. e., the cutaneous eruption. Associate it with evidence of deprivations and your diagnosis is complete.

However, there are many intermediate symptoms of relative importance. These are of gastro-intestinal origin, perhaps anorexia, vomiting, mild diarrhea, loss in weight, etc. There may be a burning of the mouth and sides of tongue which may be glazed on the order of a pernicious anemia. Later, decided psychic disturbances may appear which mature into listlessness, irritableness, melancholia and even manic-depression.

I want to reiterate here the very great importance of the history in these cases for with failure to obtain the evidence of protein deprivation the diagnosis must remain in doubt.

PROGNOSIS

There are certain considerations which affect the prognosis of a given case of pellagra. For example, the inherent forces of resistance in the patient, the duration of his restricted diet, his weight, his age, his race, the circumstance of habits under which the deprivations occurred—all play a distinct and important role in the degree of invasion of this disease.

It is no wonder that a man of good weight, young, strong, and of good habits should withstand the ravages of deprivations better than the scrawny, half dyspeptic, nicotine-filled, whisky-soaked, old individual whose environments offered little of twentieth century hygiene.

There may be finer distinctions regulating the prognosis of pellagra but in the main it must be admitted that, in just the ratio with which one measures his assets in health must he also measure his fighting ability against this disease.

TREATMENT

In point of treatment this disease is true to form. A therapeutic armamentarium has builded itself around the uncertainties of its origin. Now it can be plainly seen that, whatever success might result from the employment of any method of treatment, success is measurable only by the thoroughness with which the dietary principles involved are utilized.

The basis for all treatment other than dietary rests on purely symptomatic grounds.

The case we have to report follows:

B. W., male, age 50. Married. First seen August 13, 1924. Residence, Iowa. Prior to the Volstead Act he reported that beer was his only beverage but that since then he has indulged in whisky in ever increasing amounts until finally he consumed as much as two or three pints in a day. This practice continued unabated for two or three years with an occasional respite of twenty-four or forty-eight hours, marking ineffectual attempts to quit it all. Naturally there arose in gradual succession the various symptoms of gastro-intestinal abuse leading to added restrictions in quality and quantity of food. And finally, six months ago, his daily diet consisted wholly of cucumbers, pickled beets, wilted lettuce, tomatoes, and half of an apple. The reason is found in a complete aversion to all other foods. This continued until his visit here three weeks ago.

It should be remembered that, long before the final gastric rebellion began against all other foods, there had been a restriction of diet sufficient to affect his metabolism very materially. He has lost sixty-five to seventy pounds in the last few months.

His tissues are flabby. The teeth are in poor condition. His nostrils are unusually dry and on one side of septum there is an extensive superficial ulceration from which occurred a few weeks before a severe hemorrhage. The heart is not enlarged, there is no shortness of breath and the blood pressure is S 130 D 80. The liver is one inch below the umbilicus. Kidneys normal except for evidences of transient irritation. Blood immediately after period of detoxication R. B. C. 4,530,000, W. B. C. 5050. Diff. P. 55 per cent Lymphs. 43. Mast cells 2. Hemoglobin 80 per cent. Wassermann negative.

SKIN

Figure 1 shows a bilateral, sharply defined, port wine erythematousquamous eruption of the back of



Fig. 3. Showing improvement in face, neck and hands after three weeks of a well balanced dietary.

both hands and extending to a little above both wrists. The skin is dry, leathery, unelastic and unusually thick; there is a fine papulation over the extensor surfaces of wrists like bird-shot and a disposition on the part of the patient to constantly pick at it. Some itching, some desquamation, some pigmentary disturbance.

The face is also markedly off color and likewise the back of the neck. There has been no undue exposure to the sun.

The report of this case serves to call attention to pellagra in a manner to arouse the suspicion that there exists many similar cases in the world today.

Here is an individual, comfortably situated financially, who through the baneful influences

of alcohol subjected his body to the ravages of deprivation that one would hardly expect to find except under conditions of duress.

It is interesting to note that, as the final chapter is written, the man is making a rapid and uneventful recovery. That he braved the storm lies undoubtedly in his reserve of strength and weight.

118 South St.

REFERENCES

- No. 1 Goldberger, J. and Tanner, W. F.: Amino-Acid. Deficiency Probably the Primary Etiological Factor in Pellagra, U. S. Pub. Health Rep. 37:462, 1922
- No. 2 Wheeler, G. A., Nelson Medical Service, Volume 1923-24, Pages: 242, 548, 860.
- No. 3 Hindhede, M., Protein and Pellagra, J.A.M.A. 80:1685, 1923.
- No. 3 Shattuck, G. C.: Factors Apparently influencing the Development of Pellagra in Massachusetts, Boston M & S. J. 188, 889, 1923.
- Blocker, LdeM: Pellagra, Ohio State J. M. 19: 180, 1923.
- Sutton, Richard L., Diseases of Skin, Second Edition, Page 128.

THE ACUTE SURGICAL ABDOMEN*

CHARLES E. HYNDMAN, M.D.

ST. LOUIS

To those of you, especially the surgeons, who are constantly dealing with abdominal emergencies it is unnecessary to describe what is meant by an acute surgical abdomen. There are, however, many who, not having had the advantage of our sad and convincing experience are not so quick to recognize the early signs of serious abdominal conditions and do not realize the importance of quick diagnosis and surgical procedure for relief, whether or not the exact site of the lesion can be determined.

Abdominal surgery has only been made practical within the last 25 or 30 years and it is not surprising that there are those who still feel justified in letting an appendiceal abscess localize, or in trying to reduce an intussusception by injection of air or fluid into the rectum, or repeatedly attempting to reduce a strangulated hernia, or in treating intestinal obstruction medically for three or four days.

It is not the object of this paper to introduce any new discovery nor to advance new or original ideas, but I want to tell again and to emphasize what many others have already told and which we have, most of us, confirmed by our own experience.

Acute surgical abdomen is a term commonly applied to all acute pathological conditions within the abdominal cavity which tend to progress rapidly and endanger the life of the patient and which, as shown by experience, require surgical procedure for their relief.

It may safely be said that all those who are acquainted with modern surgical results will acknowledge that the only justifiable treatment for appendicitis, perforated ulcers, cholecystitis, ectopic pregnancy, intestinal obstruction and general peritonitis, is by surgical intervention; furthermore, that the earlier the intervention the higher will be the percentage of recoveries.

Logically then it must follow that the early recognition of these abdominal emergencies is of the utmost importance. It is the general practitioner to whom most of these conditions are first presented and it is upon his alertness and promptness of action that the patient's chance of recovery hinges. So then it is you whom I would urge to consider every abdominal pain seriously, to examine it carefully and make a diagnosis at once if possible, but by all means examine it. Fix firmly in your mind some definite danger signal. A very good general rule that has been laid down by men of large experience is, that "the majority of severe abdominal pains which occur in patients who have been previously fairly well and which last as long as six hours are caused by conditions needing surgical intervention." This, of course, will not cover every case but it will, if constantly kept in mind, serve to impress upon you the necessity of thorough examination and prompt diagnosis.

Many of these cases present themselves at night, either through suddenness of the onset or through the procrastination of the patient in calling the physician. If the diagnosis is not clear the natural tendency is to procrastinate and see how the patient is in the morning. At this point two important facts must be borne in mind. The giving of purgatives often greatly aggravates the disturbance, and the administration of opiates for relief only masks the clinical picture and if continued, as has been very truthfully said, "only allow the patient to die happy in the belief that he is on the road to recovery."

Three outstanding questions confront us in approaching an acute abdominal condition. First, is the seat of trouble really within the abdomen? Second, is it a colic or the manifestation of a general disease? Third, what is its location and what is the quickest means of relieving it?

For expediency, accuracy and thoroughness, some routine form of examination should be adopted. This form, of course, must be of individual selection.

There are general considerations to be borne in mind. The practical application of the knowledge of anatomy makes the diagnosis

*Read before the sixty-seventh annual meeting Missouri State Medical Association, Springfield, May 6, 7, 8, 1924.

more rational and serves to differentiate the causes and locate the exact site of the focus. The position and relation of the diaphragm, psoas, quadratus lumborum, erector spinae, lateral abdominal muscles, the recti, pyriformis and the obturator internus to the abdominal cavity are of valuable clinical significance. The manipulation of the thigh frequently gives valuable information through these muscles.

The knowledge of the distribution of the segmental nerves is of importance. It will be remembered that embryologically the testicle is developed in the region of the kidney and travels down to the scrotum just before birth. Hence pain is referred to the testicle from lesions developing in its original site, which may or *may not* involve the genito-urinary system. Similarly, the diaphragm begins to develop in the region of the fourth cervical segment from which is obtained most of its muscle fibres. The nerve fibres from the fourth cervical accompany the muscle fibres and constitute the phrenic nerve. With the growth of the thoracic contents the diaphragm is displaced downward to the lower outlet of the thorax. The phrenic nerves elongate to accommodate themselves to the displaced muscle. Hence, lower thoracic and upper abdominal lesions frequently refer pain to the distribution of the fourth segment on top of the shoulder. We must also bear in mind the lack of muscle representation in the abdominal wall of the segments which form the pelvis, so that irritation of the pelvic nerves may cause no abdominal wall rigidity. There may be a perfectly soft hypogastrium and at the same time an extensive purulent condition in the pelvis.

A very large number of urgent abdominal cases are accompanied by pain due to abnormal conditions in tubes whose walls are composed of unstriated muscle fibres which are not ordinarily sensitive. The necessary stimulus to cause pain seems to be stretching or distension of the tube either by gas or fluid. Mild degrees of distension of the intestine is commonly called flatulence. Greater degrees in intestine, biliary, renal or uterine tubes is called colic. Severe colic indicates obstruction, causing local distension or violent peristaltic contraction. It occurs in paroxysms and the pain which is often excruciating is referred to the sympathetic center from which the nerves come and also to the segmental distribution corresponding to the part of the spinal cord from which the sympathetic nerves to the affected viscus are derived. For example, colic of the small intestine causes pain referred chiefly to the epigastric and umbilical regions. Colic of the large intestine usually refers pain to the

hypogastrium. The pain of biliary colic is usually referred to the right subscapular region and the pain of renal colic is felt in the loin and radiates to the testicle of the same side. Excess stimulation of the nerve centers is often reflected into motor channels so that the patients fling themselves about and twist and double themselves up. If we have paroxysms of pain accompanied by most violent restlessness of agony, the probabilities are that the condition is some form of obstruction and not peritonitis, since in peritonitis movement generally increases the pain.

In acute abdominal disease there are two varieties of shock to be recognized. One is the initial or primary shock due to sudden stimulation of many nerve terminals, as in the perforation of a gastric ulcer into the general peritoneal cavity; or to the severe stimulation of a few, as in biliary colic. The second variety of shock, which may be termed late, toxic or secondary shock, is that in which similar symptoms develop at a later stage, due partly no doubt to severe afferent nerve irritation but chiefly to the absorption of poisons which directly affect the higher nerve centers. The terminal stage of this secondary shock we call collapse.

Between the primary and secondary shock there is often an interval or latent period which is very deceiving. For instance, with a perforated gastric ulcer or an acute gangrenous appendicitis there is a severe primary shock. After a short time the pulse, respiration and temperature improve and the patient gives the appearance of improvement, but very soon the symptoms of peritonitis become marked. The quiescent period has not really been improvement but a physiological reaction.

It is often necessary to differentiate medical diseases from acute surgical conditions. Such conditions as typhoid fever, cardiac and pulmonary derangements, chronic interstitial nephritis, arteriosclerosis, cirrhosis of the liver, tabes, etc., frequently simulate acute surgical conditions within the abdomen. Thorough and systematic examination will usually exclude these.

The careful interpretation of the details in a routine examination is of the utmost importance. The patient's age, the exact time of onset and the manner of onset, whether acute or gradual, the situation of the pain at first, its character, shifting or radiating nature, and its reference to micturition or defecation, are most important points for consideration. Nausea and vomiting, their character, whether before, at the same time or several hours later than the pain, often lead to quick and accurate

diagnosis. The condition of the bowels, time of last movement, presence of constipation, diarrhea, mucous or blood stools must always be inquired into.

Many cases of acute appendicitis or perforated gastric ulcer have sudden acute onset, very often while the patient is asleep. An incipient appendicitis or a tubal pregnancy frequently may rupture after certain physical strain or immediately following some apparently trivial abdominal injury.

Sudden onset of abdominal pain which causes a man to faint or collapse is pretty sure to be the perforation of a gastric or duodenal ulcer, or acute pancreatitis. In women, besides these, the rupture of an ectopic pregnancy would be immediately considered. The onset of intestinal obstruction is usually gradual, culminating in an acute crisis, while a strangulation of the gut is acute from the first, as is also the symptoms of the twisting of the pedicle of an ovarian cyst or tumor. Knowing the exact time of the onset enables us to estimate the probable pathological changes that have taken place; also to decide whether the patient's apparent present improvement is due to the stage of reaction such as occurs with perforation of the appendix or a gastric ulcer. The onset, distribution and character of the pain must be very carefully considered.

It is true that with a sudden rupture of a tubal pregnancy or a perforation of gastric or duodenal ulcer the pain is described as all over the abdomen, but careful examination usually shows the maximum intensity over the region of the rupture. If there be free infected fluid the pain will shift to where the fluid gravitates.

The character of pain is very significant. For instance, contrast the burning pain of a perforated gastric ulcer, acute agonizing pain of acute pancreatitis which penetrates through to the back, the sharp constricting pain of a biliary colic, the griping pain of intestinal obstruction, the acute aching pain of appendicitis and the fixed dull pain of pyonephrosis.

Pain radiates, especially in the colics, to the area of distribution of nerves coming from the segment of the spinal cord which supplies the affected part. This is especially true of biliary and renal colic. Also many conditions of the upper abdomen and lower thorax are referred to the top of the shoulder on the same side.

The vomiting in acute abdominal lesions, aside from acute gastritis, is due either to severe irritation of the nerves of the peritoneum or mesentery, to obstruction of an involuntary muscular tube, or to action of absorbed toxins upon the medullary centers. The character,

frequency and the relationship of vomiting to the onset of pain is important. In sudden, severe irritation of the peritoneum or mesentery, the vomiting comes on soon after the pain. In acute obstruction of a ureter, or the bile duct by a stone, vomiting is early, sudden and violent. In intestinal obstruction the interval between the onset of pain and the occurrence of vomiting gives a fair index as to whether the lesion is high up or low down in the tract. In large bowel obstruction it may be very late. In appendicitis, pain almost always precedes the vomiting.

The past history of the patient and the menstrual history should never be forgotten. There are two points of extreme value to which I would especially call attention and which I am sure are often neglected. They are, the necessity of a digital rectal examination and the presence or absence of the liver dullness. The absence of liver dullness in any acute abdominal case most certainly means the perforation of some viscus.

To the keen observer the general appearance of the patient, his facial expression, pallor, sweating, his position in bed, the appearance of the tongue, the respiratory rate and the action of the accessory muscles of respiration often will clinch a diagnosis when other signs are indefinite. The pulse at times gives valuable indications, while at other times it is not only unreliable but very misleading. In the early stages of even a very dangerous condition the pulse may remain full, regular and not accelerated. On the other hand, increasing pulse rate with developing signs of peritonitis is of great value.

Still more uncertain and not to be relied upon in diagnosis is the temperature. The presence of fever may be considered of certain value but its absence or only slight elevation can not be depended upon to indicate the condition within the abdomen.

Those who are equipped to do blood counts will find the degree of leucocytosis one of the most reliable factor in determining the patient's condition. Those who are not so equipped should, whenever possible, seek the assistance of a good laboratory man.

Now, the foregoing statements are proven facts. They are set forth in all the modern textbooks for our guidance in diagnosing acute surgical conditions of the abdomen. If given sufficient time we could, by these principles, work out practically all diagnoses correctly. But practically, as you all know, a great many sudden severe abdominal conditions arise which do not correspond in their beginning to these sure and recognized diagnostic

symptoms and which immediately threaten the life of the patient. This is an acute surgical abdomen.

The symptoms of appendicitis, which constitutes about 50 per cent of abdominal emergencies and whose manner of onset is known by all, frequently vary so as to baffle completely the most experienced surgeon. There may be an appendicitis with little or no fever, only slight rigidity or even only left-sided symptoms, with very little change in pulse rate. There may be a rupture of the gall-bladder or gastric ulcer, or a perforation of the bowel due perhaps to a carcinoma whose presence was never suspected, or an extensive purulent pelvic condition without muscular rigidity. There may be severe internal hemorrhage without any history or symptoms of pregnancy or ulcer. The point is, that the patient is sick and he is getting sicker fast. There is something wrong inside the abdomen, the exact nature of which is not clear, but it has lasted twelve to twenty-four hours. This is the type of case I would have you consider as an acute surgical abdomen and remove without delay to proper environment for immediate operation or at least further study under safer conditions.

Let the differential diagnosis and selection of time for operation be made in the hospital or at least by the surgeon, whose knowledge and experience has better fitted him for the task.

It is impossible even for the most experienced surgeon to tell always exactly what is going on within the abdomen. He cannot with safety and accuracy pick out which case will improve and warrant delay in operation from those which demand immediate interference. Hence, when the indications for operation are present the conservative surgeon gives his patient the benefit of all doubt by immediate operation and the results obtained unqualifyingly justify his position.

I have never seen a case of appendicitis, ectopic pregnancy, perforated ulcer, intestinal obstruction or intra-abdominal hemorrhage which was operated upon too soon. But I dare say all of you can recall several fatal cases which could have been saved by earlier operation.

In conclusion let me repeat that if, after a careful examination, it is found there is within the abdomen some pathological process which tends to grow worse and which is amenable to surgical treatment, there should be no hesitation in advising operation and the immediate removal of that patient into proper environment for such treatment. In this way

we will not only save many lives but will save those who do survive the ordeal of many weeks of needless suffering.

Humboldt Building.

DISCUSSION

DR. W. T. COUGHLIN, St. Louis: Doctor Hyndman said that primarily the paper was intended for the general practitioner. I hope some are present, but I want to add my comment to what he has already said. The difficulty is to get the practitioner who sees the patient to realize in time that he is dealing with an acute abdomen. Men who are in the habit of doing internal medicine do not act that way. It is hard, I know, when your livelihood depends upon treating patients to urge that a patient be sent to a hospital and operation performed; and then people are quite likely to call in someone else who will, as someone has said, "treat the patient into the grave." The trouble is that the practitioner does not know how many of these cases go into the ground; he does not know because he cannot in the nature of things have much experience with these cases. But he should appeal to others to help him to determine what to do in these cases, and he should not be so arrogant in his own experience as to disregard the wisdom of others. If he could only see the effects of delay as we see them when they are brought in in the last stages of diffuse peritonitis, his opinion would probably change. Delays are more frequently seen in children than in adults. The adult will insist that something be done, but the child is allowed to suffer; he cannot explain his pain very well.

Of course one has seen so many children with bellyache from having eaten something that the first thing we do is to give a purge, and that is about the last thing we should do. The giving of a purge is responsible for more than half of the deaths from acute appendicitis—more than half. The cases that are insidious in their onset are the worst because the patient has pain for a day or two, he gets better and pays no more attention to it until the matter becomes serious. The patients who have an acute lesion in the upper half of the abdomen have this lesion accompanied with great shock, and this point should count for much in making the diagnosis. The individual who has had a chronic peptic ulcer is subject to crises of pain from time to time, and the patient who is suddenly stricken with perforation if questioned will say that the other attacks were nothing to this. The patient who has gall-bladder trouble may not vomit at all, but he never fails to answer, "Yes," to the question, "Have you had any nausea?" I think the presence of nausea is as important a symptom as that of vomiting. The patient who has intestinal obstruction continues to vomit, it does not matter whether you withhold food or water, he vomits again and again; but the patient with acute appendix does not do that. The patient with acute appendix or acute salpingitis does not vomit much after the stomach has been emptied.

DR. CARROLL SMITH, St. Louis: I want to add my approval to what Doctor Hyndman has said and I would like to emphasize a few points he has mentioned.

First, as to the question of diagnosis, I agree with him that the main thing in the diagnosis of an acute surgical abdomen is not waste time, but to make a quick diagnosis as accurately as possible. It has been my experience in this class of cases that a carefully taken history will lead me to a right selection of the proper road to travel more than anything else. The physical examination usually is not so satisfactory, although of course it should be made, because the symptoms and signs are so mixed up in the early stage.

Another thing about these cases—I believe in early operation, but I have begun to believe in recent years that rushing into the hospital and operating almost before you have a chance to see the patient is wrong. It is surprising how in primary shock a little preparation of the patient for the operation will help. I mean that most of these cases need fluid; the tissues are so dehydrated that they are poor surgical risks. I do not mean take a day or two for preparation, but it is astonishing what you can do in an hour's time by getting plenty of fluids into these patients if they are starved or have been vomiting a great deal. It brings down the mortality.

Another thing is the importance of always thoroughly examining the lungs. It is surprising how often acute conditions in the chest have symptoms referred to the abdomen. I have seen a fractured rib give all the symptoms of intestinal obstruction. There are numerous cases reported in the literature where these symptoms have been so pronounced that it was necessary to drain the bowel for a lesion due to irritation of the splanchnic nerves, by a chest condition.

Another important thing in the prognosis is the pulse. The fever does not amount to much, but as long as your patient has a fairly good pulse—a fair rate and fair pressure, you have a good chance for success. If the pulse is fast, even if the temperature is low, then I think is the time to stimulate the patient and get fluids into him and try to improve the pulse before you operate. I believe the pulse, taken from that standpoint, is one of the most important things from which to judge the prognosis.

DR. CHARLES E. HYNDMAN, closing: Doctor Coughlin spoke about children. That is a fact, and every surgeon who sees these cases will realize how often children are neglected in abdominal conditions. The troubles they complain of are not merely belly-ache—they are real.

I am glad Doctor Smith mentioned the point of chest complications. It is true that frequently very grievous errors are made in not differentiating chest conditions from abdominal conditions.

Also it is not good surgery, no matter what condition confronts you, to rush the patient into the hospital and operate on him immediately. As Doctor Smith says, a certain time should be given to the preparation of this man for the shock that he must necessarily undergo. My point is this: get the patient into the hospital where he can be given this preliminary stimulation, where he may be given saline or whatever is necessary; a few hours or perhaps a day in the hospital may make a great difference in the outcome.

STREPTOCOCCIC LARYNGITIS SIMULATING CLINICAL DIPHTHERIA

O. JASON DIXON, M.D.

KANSAS CITY, MO.

A seventeen months old child developed difficult breathing. Four days prior the youngster had been brought from Pittsburg, Pa., and had been ill en route with a slight croupy cough. On arrival in Kansas City he began to have difficulty in getting his breath. Two days later a physician was called who immediately gave him 20,000 units of diphtheria antitoxin. There was no improvement and the respiration was still labored, although he had occasional short intervals of relief when he could

play about the house. His respiratory embarrassment continued and two days later, or four days following the onset, he became much worse and was again given 20,000 units of antitoxin intramuscularly.

At this time, October 6, 1923, I saw him in consultation. The child was unable to sleep on account of his air hunger. He had an anxious expression and tossed about continuously in his crib, with a marked inspiratory and ex-



Fig. 1. Chart showing the temperature elevation and irregular fluctuations in streptococcic laryngitis. Four days following the tracheotomy the temperature, pulse and respiration ran a normal course.

piratory stridor. All the accessory muscles of respiration were brought into full play. There was no cyanosis. He took water freely and the mother stated that he had played about the house that morning. He would get a few minutes of sound sleep from exhaustion and relaxation, to be followed by air hunger.

In order to have him under closer observation he was taken to Isolation Hospital and 20,000 additional units of antitoxin were given.

There was no membrane in the pharynx. The nose was clean and there was no cervical adenitis. Cultures and smears taken from the throat were negative for Klebs Loeffler bacilli. The youngster was kept in bed and watched closely. He seemed better and fell asleep. The next morning he was much better and I thought he was out of danger.

The accompanying chart shows the low temperature with moderate fluctuations. The leucocyte count was 14,800. There were a few granular casts in the urine. The Wassermann and blood culture were both negative.

In order to rule out the possibility of a foreign body or enlarged thymus an X-ray was made. The findings were negative.

The periods of improvement were just frequent enough to encourage waiting, especially as his heart action was good and he was taking fluids freely. After a fairly good night I decided that unless he showed a marked im-

provement by 5 p. m. a tracheotomy would be necessary. The antitoxin had been of no service and the intervals of rest were so short that the youngster was wearing himself out.

That evening at 5 o'clock, five days after the first onset of difficult breathing, a direct laryngoscopic examination was made. There was no membrane seen, but the glottis and entire voice box was swollen and purplish red with a complete obstruction of a view of the true cords and no visible chink for respiration. At either cornu was a small, white, ulcerated area the size of a split pea. A direct culture from this ulceration was negative for Klebs-Loeffler, but showed a mixed growth of staphylococci and streptococci.

Due to the patient's serious condition very little time was consumed in this examination and a tracheotomy was immediately performed without any anesthesia. There was free bleeding, which was very dark, but the trachea was quickly reached and the tube inserted. Immediately the child fell into a deep sleep on the operating table and, except for the usual vigorous coughing attacks, he was undisturbed. There was a moderate amount of secretion but no membrane and no odor.

That night, October 9, he slept soundly and took water freely when awake. His temperature subsided and the following day he was alert and playful. His improvement continued and nine days later the tube was removed. This was done in the morning in order to give him a day's trial. That night he snored considerably, but the following night was much better and in a few days he breathed easily. The tracheotomy wound closed snugly immediately upon removal of the tube and healed without infection. His voice was husky for a few days and then returned to normal and he has had no trouble since.

The points of interest in this case are: This child had been exposed by a long railroad journey at a time of the year when diphtheria was prevalent; diphtheria could be excluded by lack of response to massive doses of antitoxin, negative cultures, and by the absence of a membrane. The laryngeal stridor and evidence of obstruction were intermittent but progressive. In the face of negative cultures, the administration of diphtheria antitoxin in such a case is always advisable as it can do no harm.

Routine early intubation in a streptococcic laryngitis is a serious procedure and was here not indicated. Tracheotomy was successfully performed and was imperative.

It is of speculative interest why this child in his exhausted and infected state did not de-

velop pneumonia and die. With relief of the dyspnea by tracheotomy and the self-limitation of the infection, the improvement in the general condition permitted the rapid convalescence of the child.

The question is here raised as to the greater safety and advisability of tracheotomy over intubation in streptococcic laryngitis.

917 Rialto Building.

THE TREATMENT OF SKIN CANCER BY ELECTRO-COAGULATION IN CONJUNCTION WITH QUARTZ LIGHT THERAPY*

RAY C. LOUNSBERRY, M.D.

SPRINGFIELD, MO.

There is no subject in the realm of medicine which has been under discussion longer than that of the treatment of superficial, squamous cell epitheliomata of the skin. Books have been written on this great theme while essayists have discussed this subject for years, all of whom ultimately arrive at this conclusion: that the sooner any abnormal hyperplasia of cells, which develops in the later decades of life, are removed the better the prognosis for an uneventful recovery.

The causative factors which enter into the etiology of this disease is based upon Conheim's theory of embryonic rest, or, in other words, is wrapped in a veil of mystery. Thus, in treating this condition the cause should be eliminated if possible. No author seems to have come to a definite conclusion as to treatment, but all have arrived at this solution of the problem, that is, destruction of the abnormal hyperplasia of cells as soon as they appear in the form of a keratosis. Some destructive force should be used in the beginning of the treatment and this followed up with constructive forces.

The destructive forces which are used primarily in the treatment of superficial growths today are as follows: Radium, X-ray escarotics, fulguration, vesication and diathermic electrocoagulation. All of these methods have their retinue of advocates and all methods have proven their efficiency in the hands of expert technicians.

The method of treatment which I shall discuss briefly, is that which has been used widely by many electrotherapists, such as Waggoner, Sampson and others.

We all know that superficial cancers are usually associated, as I have briefly stated, with some form of a scaly, oily, seborrheic karatosis

*Read before the sixty-seventh annual meeting Missouri State Medical Association, Springfield, May 6, 7, 8, 1924.

and, if you will note carefully, nine cases of skin cancer out of ten are found in individuals who have a hypersecretion from the fat producing glands of the dermis, and most all cases are associated with warts, pigmented moles and other forms of hypertrophy.

In my discussion of the diathermic electro-coagulation treatment of superficial growths I will confine myself in the first place to an elementary consideration of the physics which produce the electrical force, which has been harnessed by man, and which can be used in the treatment of so many diseases. This force is known as high frequency.

High frequency currents originate in the discharge of a high voltage current from condenser plates. These discharges are oscillating and are produced by propelling a current of electricity from an ordinary 60 cycle alternating street current through coils made by wrapping different sized insulated copper wires around steel cores. The current is thus transmitted from one wrapped core to another. If the primary coil consists of ten turns of wire and the second consists of one hundred turns of wire, the voltage produced in the second coil will be ten times that of the first. In this manner an ordinary 60 cycle, 110 volt current can be stepped up to 1,110 volts. Thus, by adjusting the size of the insulated wire, the arrangement of the coils and the number of turns, any amount of current can be produced.

We are indebted to Tesla and D'Arsonval for two important forms of currents. Tesla originated a coil which produces a high unipolar voltage while D'Arsonval devised the method whereby a current of high voltage could be stepped down.

I used the bipolar method on ten selected cases with apparent satisfactory results. By the term selected I mean that all the cases were found in individuals with a normal amount of natural resistance, individuals who were declared physically normal with the exception of the dermal system. The cases which presented themselves for treatment were persons who were between fifty and seventy years of age, who complained of lesions above the angle of the jaw which apparently had not metastasized. Thus, the cases presented had favorable prognoses. All cases were diagnosed clinically as squamous cell epitheliomata.

The technic used was that which is used by all electrotherapists. A piece of block tin was attached to one terminal of D'Arsonval current and fastened properly to the patient. By properly I mean that all electrodes should have

rounded edges. No projections or points should be found which might produce burns. Always be sure that the contact is perfect and that the electrode is bound down by straps or bandages so they will stay in place. Then connect the other terminal of the current to a suitable insulated needle holder in which is inserted a sharp pointed aluminum needle. This needle is plunged into the anesthetized area to be treated, and the current is turned on by means of a foot switch until the area has become white. If the area to be treated is large reinsert the needle until all areas are coagulated.

This treatment is followed a few days later, that is, when the reaction in the adjacent tissue has subsided, by the Finsen water cooled ray. The rays stimulate the granulation of new tissue while at the same time aiding in the process of elimination of by-products which are harmful to the growth of new cells. The action of the light in my hands has proven a wonderful aid in the production of better cosmetic effects in the resultant scar.

In conclusion, let me state that there is no more satisfactory method of destroying benign, semimalignant and early malignant growths than that method known as electro-coagulation. This form of treatment has been used by many dermatologists with a vast amount of real success. Finally when patients learn that a technic has been found which at a minimum of expense can produce good results, they will likely apply for treatment earlier and thus so many late cases with extensive destruction of tissue will be eliminated.

710 Woodruff Building.

UNRECOGNIZED CLINICAL IMPORTANCE OF ANAL PRURITUS

J. F. Montague, New York (*Journal A. M. A.*, Nov. 29, 1924), states that as a symptom of visceral disease or derangement, the value of anal pruritus cannot be overestimated. He states further that if every case of anal pruritus were subjected to a sigmoidoscopic examination, carcinoma of the rectum would be seen more often in a truly operable state, rather than in the inoperable form in which it is now generally brought to the surgeon's attention. Three cases are recorded. Anal itching was the complaint from which relief was sought. In one case bimanual examination of the pelvic organs, however, showed the presence of a large mass in the region of the right tube. On operation, two large unilocular ovarian cysts were found and removed from the right ovary. An uneventful recovery with complete cessation of pruritis resulted, nor has it recurred in the eighteen months since. In the second, treatment of an enlarged prostate gave relief from the itching. In this third case, sigmoidoscopic examination showed the presence of what later proved to be an adenocarcinoma in the wall of the intestine at the rectosigmoid junction.

SPECIAL ARTICLE

BANQUET GIVEN IN HONOR OF DR. NORMAN B. CARSON AT THE ST. LOUIS CLUB, NOVEMBER 7, 1924, ON HIS EIGHTIETH BIRTHDAY

Dr. Mudd, Toastmaster: I want to give a toast to my friend of earliest days, a famous surgeon, a good fighter, an absolutely honest gentleman, as good a sport as ever "rooted" for the Cardinals or occasionally for the Browns, as ever fired a gun or cast a fly, our guest of the evening, Doctor Norman B. Carson. (All arise and drink toast.)

Dr. Mudd: I am proud to see such a representative gathering on this occasion. I think we honor ourselves in honoring Doctor Carson. You have heard some of the expressions of people away from here of the regard and affection and honor they have for our guest and we have here tonight a gentleman who has shown his appreciation of the situation, shows the honor in which Doctor Carson is regarded by the men of the profession elsewhere by coming a thousand miles to talk to us tonight. It gives me great pleasure to introduce Doctor Richard Hart, of Philadelphia.

Dr. Hart: Mr. Toastmaster and honored guests. It is indeed a great honor to come a thousand miles to try, if possible, to do tribute to a man who is eighty years old, has lived in this town and has been such a conspicuous factor for medical good as is the guest of this evening. Doctor Carson was born at a time when it was three times the size of your sister city, Chicago, and born in the great valley of the Mississippi River. It has been a privilege to any man to have known the Mississippi River in the days when it was the greatest waterway in the civilized world.

Time has given to Doctor Carson enormous opportunities to see many of the wonderful changes that have taken place in his eighty years of life, a life spent in close observation, and nobody knows better than Doctor Carson the changes that have taken place in this city and all the enormous advances which he has been so fortunate to be able to see and follow.

Now, we, a body of medical men can look back, Doctor Carson can look back, on the changes that are taking place in medicine. When he was born and when he began to practice medicine in this city, what were the conditions of our hospitals, what were the conditions of our people? Changes have taken place to an enormous extent in a social way. You find in St. Louis evidence of a great number of people who at the time of his birth, from

the time of his early life, were chattels, were slaves. Today they are now regarded as your brothers. Fortunately, we all don't look on them exactly in that way but still they have all the privileges that you have, and some of them maybe have more. When we look at medicine in those days we realize we knew very little about surgery, only certain portions of the body were approachable, we thought; the abdomen and the chest and the brain were concealed cavities—couldn't be approached in any way, neither were they approached until the advent of the works which we attribute to Lister. The advances in bacteriology have been responsible for many of the advances we find today in surgery. Pasteur, to whom we owe I might say everything by his work in developing certain lines of research, was the key-note, he was the power behind Lister, and if it had not been for Pasteur we would never had our Lister. And I just simply want to point to one man in Philadelphia, the greatest scientist I think—oh I might say the world—but that America has ever produced, a man, an expert on almost all branches of science, a great biologist. Some few of you here may possibly have had the opportunity to have sat beneath him and knew him during his lectures. That was Joseph Lybig, a great intellectual giant, and a man who seemed to know every phase of science.

Now Doctor Carson has had an opportunity to see the great advances in medicine, when malaria and all the various diseases which were due to insects, the mosquito, the louse, the tick and fly, not so very many of them, but still they were responsible for a great number of diseases. When Doctor Carson started to practice medicine and when I started to practice medicine, we knew nothing whatever of those diseases having their origin from various insects that I speak of. Medicine has made enormous advances in the last few years. Think of the discovery of insulin; what a change it has made in dealing with that great class of cases that we always were confronted with and which were surgical bankrupts, so to speak. Now, with the use of insulin a surgeon in handling those cases will deal with them and make them reasonably good surgical risks. Then we may look at what serum and therapeutics have done. Look what we had during the Civil War, look what hospital gangrene meant, look what tetanus meant. I had the pleasure of having charge of an English hospital during the war when we had 143,000 cases of terribly injured men, and I think out of those 143,000 we had five cases of tetanus, and I think only two of them were fatal. Now, can you imagine a war such as we had during the period in France and Belgium where the ground was reeking with all forms of

bacterial growth, what the mortality would have been if it had not been for the antitoxin serums. That has all been the outcome of very comparatively recent years.

It has been a great privilege for a man like Doctor Carson to have seen all these great advances in surgery, in medicine, and to have had an opportunity to see and practice and know as the result of his experience the difference between surgery of today and the surgery of forty years ago. Few really can appreciate the hospital wards at the time that Doctor Carson started to practice surgery. I can visualize it because I come in very near that category, when we had in the hospital wards only male nurses, when the woman nurse was unknown. Some of those male nurses were very wonderful men indeed but you take the rank and file of them, they were recruited from a very inferior class, were patients brought into the hospital and then finally remained on as hangers on in the hospital and then took up and tried to carry out and assist in the general nursing of the hospital. When all our great manufacturing centers, probably not so great then as they are now, but our railroads, when they mutilated their employees to a great extent. When railroad cases were common. I must say now they are very rare. How those cases came in and developed, were subject to all the effects of contagion that there were then, many of them succumbing to pyemia, septicemia. Those things now, as you see them in the hospital work, they are unknown. Just recall having, some of the older men of this room will recall those cases of pyemia where there are intermittent chills coming on maybe sometimes every other day or every day, temperature running up to 100, maybe 107, but then finally dying and then we making out a post mortem and finding out liver or a kidney or a bladder affected. We knew little of it then, but as science advanced, we began to recognize them and now they are practically, not practically but unknown.

Those are things that Doctor Carson has had an opportunity to see and to remember. There is probably no word in the English language that is more difficult to say than the word no. It is a very simple word but very few people really have the courage to express it, and there is no word in the English language that carries with it so much as the word service. It has been the fortune of you gentlemen to be put in a position where the word service means so much. I am sorry to say that it is not always recognized by the profession in the broadest sense, but we have here with us tonight a man who has recognized what service means and has risen to the occasion, and for the many, many years of his life he has followed that word out, he has given service, serv-

ice to the best of his ability, and his ability was no ordinary ability. He had that courage that goes with ability, and as a result he has gathered here tonight a large group of men who have come here to do honor to a man who has given service, who has given the best that was within him to his fellow man. And of all the attributes, I might say, the three attributes which fortunately he is endowed with, namely, faith, hope and love, and when you come to analyze what love is you find it is the personification of service in its concrete form. He has been brave, he has been honest, he has been forcible, always seeking after the truth, and nothing has ever deviated him from the truth or would cause him to stand by anybody who was in any way crooked or unprofessional. That is a great thing to be able to say at the end of a long lifetime devoted to service, it means a great deal, and you are fortunate, gentlemen of these parts, in having an opportunity to be associated with a man of that type; a man of that type leaves his imprint on the community in which he lives, and I know you are better doctors, you are better surgeons, better physicians to have been associated with a man who occupies the position which he does in this city and in the community, his influence for good, and may I hope and trust that his influence will always be with you.

Doctor Carson is fortunate, very fortunate I must say in not having devoted all his life to the bare routine of medicine and surgery without any of the side issues that come into life. He has been fond of nature, he has been fond of sport, he is fond of his dog, he is fond of his gun, he is fond of his rod, and I must say gentlemen, I would give you the advice of a man who is not very much younger than Doctor Carson that one of the greatest joys of a professional man is to have some hobby. I have seen so many men devote their lives to routine work that when the time came to give it up they had no hobby they had nothing to do but to look forward to the inevitable.

It is a great pleasure tonight to be present and do honor to a man who has occupied the prominent position and has the love and affection of the people around you as you have tonight. (Applause.)

Dr. Mudd: Gentlemen, as you all know, Doctor Carson has been connected with Washington University as a teacher for practically all of his professional life. We are honored tonight with the presence of Doctor Herbert Hadley who now is Chancellor of Washington University and has kindly consented to say a few words on this occasion.

Dr. Hadley: Mr. Toastmaster and Doctor Carson and fellow members and fellow citizens, the last class being small and select. For a long number of years, in fact since I

came to know the City of St. Louis, I have been impressed with the fact that it is the best feeling community in my opinion that there is in the United States, and since it has been my privilege to be a citizen here it seemed to me that the commendable portion of the time of the people of this city is devoted to giving dinners to their fellow citizens who were going on a journey, or returning from a journey, or had done something or hoped to do something. But it would indeed be an unimaginative and unappreciative community that would not gather together upon an occasion such as this to pay a tribute of regard and affection to a man who has led as long and useful a life as has Doctor Carson. And I am very glad indeed to come here tonight as a citizen of St. Louis to join in that tribute and I am very glad indeed to come here as the administrative head of Washington University and join with you in a formal expression of this tribute. There are of course many of you or most of you who can speak from the standpoint of longer and a more intimate acquaintance with him than can I, but as I have listened to the expressions of congratulation and approval of his long life it seemed to me that perhaps the emphasis was placed upon the wrong proposition and perhaps upon the wrong person. It is a privilege to have lived so long as Doctor Carson has lived but it is a distinction to have accomplished so much and with so much medical and surgical skill as is represented in his friends here it seems to me that one might fairly hope to live forever. And so we may hope that Doctor Carson will enjoy many years through the assistance of you all and with that health and efficiency that has been his up to the present time.

I wish to express to you, Doctor Carson, on behalf of the University that you served so long and so well its hearty and sincere congratulations upon the completion of your eighty years of life, hopeful, healthful and buoyant. We wish to thank you for the great service that you have rendered to the cause of medical education in that institution and hope that your life may be long, spent in further service to your fellow man.

There is just one word of a personal nature that I wish to say, and that is this: About a year ago it was my pleasure to do my full share in consuming a mess of quail, which was the result of the trusty shot-gun and the keen eye of Doctor Carson, and I hope that that skill and unerring aim which resulted in the production of such very attractive food at that time will long continue, and I hope that his memory will not be impaired to the extent that he will forget that I enjoyed them very much. (Applause.)

Dr. Mudd: It is not given to all of us to drink of the fountain of youth, but there are some persons who have done a great deal toward testing this matter. Among others, there are two of the fellow citizens which Doctor Hadley referred to and our guest of the evening. Almost any day for many years past, there could be seen walking down town three gentlemen, good fellows all of them, who by companionable interchange of ideas, good company, have kept their eyes bright, their minds keen and their hearts in the right place. One of these gentlemen is a very distinguished lawyer, a good fighter, and what some people don't perhaps know, an author of note. I am going to call on Mr. Isaac H. Lionberger, for a fight.

Mr. Lionberger: I am so fond of the doctor that I am not going to trust to the capriciousness of my verbosity. I want to be brief and I want to leave nothing unsaid that I have to say of him. I beg of you to pardon me if part of the address that I shall make I read from a manuscript. It seemed to me unworthy that I should trust to the inspiration of the moment, forgetting all my feeling which is after all one of the most sacred things of my life. It is not very long, I can assure you at the outset.

The occasion is to me significant in the highest degree. Lawyers have given dinners to lawyers, doctors to doctors, men of affairs to captains of industry, preachers to preachers, and now and then all of these have united to dine and praise a man conspicuous for service to the state; but never have so many men of various callings come together in this city to do honor to so worthy a man. He is a doctor by profession, but he is far more. Others have spoken of his professional accomplishments; to me has been assigned a more congenial office, for I am permitted to speak of his private virtues.

The Doctor and I have walked together and talked together these many years. I judge of him by what I saw him do and heard him say. I have observed his behavior and prodded him with questions and explored his opinions. I knew what he praised and what he condemned. I have listened to the story of his life told by himself, and I know that he was that most precious product of nature; a soft, meek, kindly, patient, considerate, honorable gentleman, proud as Lucifer; upright as any judge and as brave in his uncompromising honesty; gallant not only in his treatment but in his opinions of women; steadfast in his friendships and uncompromising in his hostilities. Born a gentleman, he has throughout his life been characterized by qualities which compelled the deference of all who knew him. The more

closely I observed him, the more I heard of him, the more I saw of him, the more I admired him.

What most pleased me in the Doctor was the traditions that clustered about him. He was of the old school—intolerant, uncompromising, high-minded. He looked up to no man and down upon none. I have teased him into exasperation, but never disturbed his dignity. I have taken a social glass with him and tempted him to indiscretion, but he has never lapsed from his character. The more he drank, the more polite he became, and the more indiscreet his revelations of himself, the more they did him honor. He has told me of his cases, yet what he learned professionally he guarded conscientiously. Surgery didn't harden him to human suffering. I have observed him almost to weep over a hopeless case, and once when the malady of a young woman seemed beyond his skill, he moped and sulked and would not talk; but when he divined the cause and rescued her with his knife, he rejoiced mightily and was gay as any boy. She was a pauper.

The Doctor was a very modest man. I have heard him tell, as among the discomforts of his profession, of a midnight summons while he was on a hunting trip, and of a long, hard drive through a wilderness to discover no more than that a patient who owed her life to his skill, would not let her husband sleep until he had brought with him her benefactor to receive her blessing and eat her supper.

I have heard of his successes and chagrins. In his youth he was associated with Hodgen. One day a country woman came into the office suffering acutely from an abdominal tumor. Hodgen pronounced it incurable, Dr. Carson thought otherwise and begged permission to operate. As death seemed certain and the woman's suffering was constant, she and her husband, after a tearful conference, consented. He saved her life, and so won his distinction.

Perhaps I am at liberty to add what follows. Dr. Carson attributed the success of his operation to the cleanliness with which it was performed. The older doctors scouted such a suggestion, and one of them, suspecting what he heard, insisted upon exploring a case and by his soiled fingers killed a woman from whom a tumor had been removed.

Dr. Carson, as I have said, is a product of tradition. Born in the 40's he lived before, during and after the war, and so was fashioned by the old French-Southern influence, somewhat modified by what followed. He cherished his prejudices—even his animosities, and almost persuaded me that the gentleman's character must be intolerant in order that it might survive.

I do not mean to say that the Doctor is an obstinate man very far from it. Notwithstanding his sturdy self-respect, he is open-minded in a most extraordinary way. He even invites instruction, yet he who dares tell him always feels a diffidence in judgment, a reluctance to exaggerate, a wish to be exact, which I attribute to his psychic influence.

All my life I have sought the companionship of old men and wiser men and I have been intimate with very many, yet I think that none of them was more useful to me than this kindly simple-hearted companion of a morning's walk who knew less, far less of the affairs and men of the world than I. I had been brought up in a rougher school than the hospital ward or chambers of invalids; and it refined me to associate with him. I have known many good men, but none to compare with him in those delicate, ethereal qualities which lend so sweet a fragrance to the character.

I have known Dr. Carson not only as a friend but as a patient, and can testify to his skill as well as to his tenderness. My wounds healed instantly and left no scars.

His personality was influential not only with his friends and patients but with all who encountered him. I have heard the lawyers say that he was the best witness in the city, his character inspired confidence and won verdicts from the juries. The judges trusted him. He affected nothing, he pretended to nothing, he extenuated nothing, and by his candor always baffled cross examination.

Mr. Bixby and I have heard from his lips an account of the development of medical science in this city and of the men who contributed to it. His recollections of Pope and Hogden and Mudd and of the host of surgeons and physicians who practiced here between 1870 and 1920 would constitute a precious memorial of men worth remembering. He witnessed the birth of the new surgery, of Listerism and Pasteurism, and told us of their amazing consequences. We tried hard to induce him to write out these recollections, but his hand refused the office and we could not prevail upon him to use a stenographer. Your periodicals I am informed contain various contributions made by him in his prime, and these are still consulted. I know that he taught for many years in the medical school, was head of a hospital and was intimate with all those who for half a century helped to establish the traditions of the great school which now adorns and distinguishes his native city. Always, under all circumstances, in every relation, his character was influential; a character so high and yet so firm, so resolute and yet so gentle, so cautious and yet so brave, so considerate and yet so constant that none who

knew him failed to yield to him that affection, and homage which are the best fruits of a noble life.

Having now flattered him, as a friend has a right to do, permit me to reveal to you some of his weaknesses, his deplorable weaknesses, which reconciled me to my own inferiority. The Doctor is full of reminiscences; it is dangerous to let them loose. He is impetuous. In his youth he knocked down a man at the old Home Circle. "What did he do?" I asked. "I did not inquire, sir; a lady resented his conduct and I struck him." He was fond of fishing and hunting and cherished his rods and rifles, and I have been forced to listen while he told me how he spliced a splint with more pride than ever he described an operation. He did not know how to invest his money. Every vagrant peddler of doubtful character beguiled from him his fees. He hated specialists and could not be relied upon in consultation to confirm a foolish diagnosis. He would not trade business for business. I have known him to denounce even a successful quack. He is foolish enough to scorn commercialism and prefers his art to his income. He hates policemen, and new women, and prohibition, and does not trust the politicians. He is credulous in an extraordinary degree and believes in war to end war, and Mr. Wilson and the League of Nations. On the other hand, he refuses to trust the preacher to help him get to heaven. He believes in immortality, but thinks it a gift gratuitous. He is a strange man, this doctor of ours.

I have known few like him. Modesty, sincerity, courtesy and dignity have not been common virtues in my time. One does not often encounter the grand manner. His type is fast vanishing. I have deemed it an honor to be admitted to his friendship. I like to be with him. He never offends me by condescension. He affects nothing. I even think I understand him. I do homage to such a man, and rejoice in this opportunity to tell you who have known him so much more intimately, that many others share in your regard for him.

To what extent he owes his character to your noble profession I cannot tell, yet when I think of him I am minded always of the Hippocratic Oath of antiquity:

"I swear by all the gods of healing that I will fulfill this oath and covenant to the best of my ability; I will live for the benefit of my patients, and not for their injury, nor for any unlawful purpose. I will not give a deadly drug to any one, though it be asked of me, nor will I lead the way in such counsels, and I will not give a woman pessary to procure abortion. But I will keep my life and my art in purity and holiness. Whatsoever house I enter I will enter for the benefit of the sick, refraining

from all corruption of male or female, bond or free. Whatsoever things I see or hear concerning the lives of men in my attendance upon the sick or apart from it, which ought not be blabbed abroad, I will not speak of, counting such things to be religious secrets.

"If I fulfill this Oath, be it mine to enjoy life and art alike with good repute for all time to come; but if I violate this Oath, may the contrary befall me."

Dr. Carson kept this oath, and to him I am tempted to say what Orlando said to Adam:

"O good old man, how well in thee appears the constant service of the antique world, when service sweat for duty, not for meed. Thou art not for the fashions of these times, when none will sweat but for promotion."

I am glad you did not postpone this ceremony until after his death, when he could not hear you. Fame is but an arrangement of letters in a book or on a tomb. To the dead it is as harmless as the breath of a rose to a distant passenger. The homage we now render the Doctor will sweeten the years that lie ahead of him.

I am nearly done. I hope that after my death when men shall speak of me and have a motive to forget my infirmities, some one may be found to say of me one or two of the things that you and many others think and know and say of him while he lives. I wish that during my life I had done as little to regret and as much to be proud of as this humble gentleman of eighty summers.

And now in closing, let me give you the jottings of a man who is almost as old, I am only 70 to be sure. The girls in our time, as the doctor and I have many times supped over a bottle, they were nice girls, they were sentimental, they were charming, they were flattering, they were caressing, they were flirting, they were literary, they were prudish. These qualities are obsolete, gentlemen, many of them. The young men, as we called them, were gallant, or intellectual, or promising, or industrious, or good, or dissipated, and they wore beaver hats and frock coats and stocks and tight pants and look very funny indeed to us now. The ladies wore hoop skirts and shawls and flounces and lace caps, wide sleeves and they had feet but nothing else, and they had dignity. There were parties, sociables, strawberry festivals, river excursions, picnics, buggy rides, front steps, Sunday teas, flattering proposals, gallantry, shopping on Market street between 3rd and 4th, promenade on 4th, ice cream parlors, church circles, agricultural fairs, booths, hospitality and visiting. The river front was a wonderful place, teeming with men and activity, steamers, no railroads, commission merchants and saloons and bargaining, sharp practices, and

money was 10 per cent, universal use of endorsements and merchant princes as we called them in those days. And the town was beautiful and muddy and had shade trees and stately mansions, and single track roads. Eighth street was the western suburb. There was good hunting, prairie chickens, snipe, ducks, venison, chickens two for a quarter; slaves, niggers, mammies, the bellman, "Lost child," the sportless Sunday. Doctoring was very different. There were blue mass pills, castor oil, licorice powder, sassafras tea, sulphur and molasses and tonics and sore throats and bacon, red flannel and health, salivating, bleeding, cupping, starving a fever and feeding a cold, cholera, smallpox, no trained nurses. Nothing but mutual help. The family physician, no hospitals, the tin bath-tub, bath around once a week whether you needed it or not, gentlemen, no sanatoria, no vacations, no playgrounds, no gymnasias, cleft palates, hare lips, diseased tonsils, mumps, measles, scarlatina, no quarantine, no disinfection, no appendicitis, no appendix, no twilight sleep, no impure milk. And no railroads, nor automobiles, nor telephones, nor flappers, nor new women, nor right to live one's own life, nor politicians, nor clear water, nor prohibition, nor chaperones, nor "drives," nor syndicated charity, nor clubs, nor golf, nor tennis, nor baseball, nor football, nor swimming pools, nor parks, nor movies. There was no anything then, gentlemen. It is a far cry to the Doctor's youth. (Applause.)

Dr. Mudd: I felt that the evening would be incomplete if you didn't have some word from a member of the legal profession. Now I am going to call on a man who has worked with the guest of the evening, in an honest, sincere service to humanity for many, many years, Doctor Frank R. Fry.

Dr. Fry: Mr. Toastmaster and gentlemen. My only regret has been that I couldn't have worked longer and more intimately with Doctor Carson. What opportunity I have had, however, has been one of the leading inspirations of my life. I began to be particularly interested in Doctor Carson's work when he was doing in this city the most effective neural surgery of the day, when it was occupying his attention very largely and when he was outfitting himself to the fullest extent that was at that time possible.

I recently ran across a title, "How to Live a Hundred Years." Now that probably is not so interesting to a medical audience as it would be to a lay audience, and yet it would seem that it is still quite a burning question, in fact, so far as I can see, has been ever since the days of Methuselah or at least ever since the human family has lost the Methuselah recipes and have tried to substitute something therefor. As I say, how to live a hundred years would

not interest a medical audience to the same extent as it does a lay audience because we know too much about it from a physiological standpoint. But how to live a *hundred per cent* would probably interest our group more succinctly. We are drawn into a first-hand relation with humanity in a way to try our endurance, not only physically but spiritually. A hundred per cent means one thing to one group, something else to another group. For instance, none of us would want to live a hundred per cent just good, unless it be the prohibitionists, or people of their ilk. Neither would we want to live a hundred per cent bad. Some people seem to be trying to lead that kind of an existence but there is something the matter with them, they are psychopaths. Probably the nearest we could come to a hundred per cent of living would be a hundred per cent *straight*, and yet there would be a variance of opinion as to what straight means. Some people don't know what straight is, they would like to know, but they can't. It is a question of personality. We know a straight man when we see him, that is, if we know him long enough. If we attempt to analyze why he is straight in any particular instance, we have as much trouble as the individual himself would have in telling why he is straight. Maybe he thinks he knows. The question is whether he knows. You don't know why you are particularly straight any more than the other fellow knows why he is particularly crooked. In other words, it is the great question under personality. We can't put it into formula or words. Our ordinary sensibilities do not apprehend the items of character, the items of it in any individual. Gall, the phrenologist, years ago interested us somewhat by explaining what lay under the cranial bumps and his analysis was not so bad for the time. It had some analytical foundation. It led to better methods. One after another until we come down to the very latest, namely Freudians spading around in the unconscious field. They think they have reached the final analysis of the person, that is, some of them believe so, they believe that they have attained the safe finale. Of course, other Freunds et al will follow, but after all there always will be something intangible, something that can't be described. For instance, Mr. Lionberger's beautiful specialized analysis of the character of an individual enables us to gather together a few items but still there are depths, there are other some things that we can't reach, can't analyze; and yet when we see the thing it is beautiful, we know it; we know that there are no yellow streaks in it, and we know various other things about a true character. Some of us have read in the "Confessio de Medici" beautiful sentiments, sentences, that impress us, and read-

ing them we think over the individuals, groups of individuals we have known in our own time, in past times, and there has been that beautiful something, that something that has been perpetuated through all the history of our profession. In all these groups there have stood forth exemplars in every age, standing out so that we readily recognize them as characters of the true type, standing for something as I say in a sense intangible yet very definite. I thought in listening to the written and telegraphic communications this evening how far an example of this kind may reach, reaching beyond the individual's immediate group to other groups, reminding us that rectitude as near as we can strike it is forever worth while. There is no time of our life when, if we are broadminded enough, that we can be assured in ourselves, in our individuality of what our life stands for. Only with the accruing years, may we get nearer to a just recognition of what earlier periods of our life have meant to others and to ourselves, and yet we are never quite satisfied with anything that we may seem to have accomplished. And so it should be.

I can think of no more significant commendations, more definite, than those that we have heard this evening. I esteem it a great honor to attempt to join my voice, my sentiments with others on this occasion.

In my enthusiasm over the splendid sentiments I have listened to from speakers who have preceded me I fear I have strayed from the special topic assigned me by our toastmaster, namely, particular mention of Dr. Carson's professional work. But after all this is an open book not only to the profession but to a large contingent of the intelligent laity. Doctor Carson's activities were beginning at the time that asepticism was gaining adherents, just at the time that too many were willing to cut aseptically instead of anatomically, at the time when it needed men that knew how to hue to the line and do it fearlessly, just at the time when a man was apt to be most criticised for conservatism. We all know how he withstood that kind of thing, we know his conscientious efforts to perfect himself and his technique. It was at a time when a legitimate technique as distinguished from a flimsy aseptic protection was all important. This early impressed me, and it always has, in contemplating Doctor Carson's work. I know many others were conscious of this influence at the time that I first felt it, and later.

Dr. Mudd: Special request, gentlemen, of the guest of the evening. I am going to surprise and ask for a few words from Chancellor Hall.

Dr. Hall: Mr. Toastmaster, and Doctor Carson and gentlemen: This is the second time in my life that I had a joke played on me

with reference to the guest of the evening. When Doctor Carson's 50th anniversary or connection with Mullanphy Hospital was celebrated, I very kindly received an invitation from those in charge all printed in gilt with the letters showing the speakers and subjects, and it was very pretty, very nice. I said to Mrs. Hall: "Inasmuch as that is at the hospital, they won't dress, will they? I think I ought to go down there because I am very fond of Doctor Carson." She said: "Well, I think I would wear a dinner coat." I put on my dinner coat and went down to the hospital and took a seat in the audience and was talking with some friends and a gentleman came down the aisle and motioned to me and I went down and he said, "Doctor Carson would be pleased if you would come up on the platform." So, I said, certainly, I would be willing, glad to do anything to make the occasion happy for Doctor Carson. So I followed the gentleman on the platform, and as I just sat down he remained standing and said: "Ladies and gentlemen, you have the program of the evening before you showing the speakers, but fortunately Chancellor Hall, of Washington University is present and I know he will say a word or two on this occasion." That was the amount of preparation I had then and you have seen what amount of preparation I have now. I felt then and I feel now a pleasure to respond to anything which will be a tribute to one whom I have learned to love and respect through an acquaintance of a quarter of a century. Doctor Carson was in the prime of his life when I first knew him, recognized everywhere as one of the outstanding surgeons of the city, thoroughly respected amongst his colleagues and honored by the general sentiment of the public. It became my privilege to be more intimately associated with him ten years or so later than that when I took charge of the university. He was then getting along in life towards where I am now, and he was counselling together with Dr. Shapleigh and one or two other doctors with reference to the reorganization of the medical school. There were many problems that were very delicate, some of them very hard to adjust, some of them had given rise to unpleasant feeling and all sorts of things to settle. These two men I consulted at different times. So I went in and tried to bring harmony out of discord. Doctor Carson was always so frank, so straight, so reliable that I felt when I left his office after consulting with him that I was talking with an honest man from whom I could expect an honest conviction, an honest expression of opinion, and whether I agreed with him or not, I knew just where he stood. That has been my observation of the man through this quarter of a century of acquaintance.

Now, old age has some advantages over all other ages that we experience. Youth is pretty confident with what it is going to do. Middle age is quite likely to be conceited about what it is doing, but when you get to old age the record is there, the report is made, you have got your record, you have got your standing, and all is before you as a book. It is there and shows what a man has been, not what he hopes to do, not what he thinks he is doing, but what he has actually done can be seen and known. That is the record of the guest of the evening. Now, with him age has come. He can look upon it with pride, with honest pride, as a colleague of his, of the profession, he has done a splendid service, he has added to some knowledge of the subject. He has brought relief to suffering, he has brought pleasure to many, he has prolonged the life of many, and to all he has been a tried and true friend. It is my great delight to join with all of you here in the medical profession in honoring the guest of the evening. (Applause.)

Dr. Mudd: Gentlemen, I thank you all in behalf of Doctor Carson and those who have tried to make a success of this occasion.

THE CHEMOTHERAPY OF SULPHAR-SPENAMIN

The technic employed by George W. Raiziss, M. Severac and John Moetsch, Philadelphia (*Journal A. M. A.*, Nov. 29, 1924), in their trypanocidal tests was essentially the one described by Voegtlin and Miller, which is briefly as follows: A seed rat, infected with *Trypanosoma equiperdum* (the parasite of dourine or horse syphilis) and showing about 200,000 parasites per cubic millimeter of blood, was bled by decapitation directly into 5 c.c. of saline solution containing 2 per cent of sodium citrate, and about 0.5 c.c. of the resulting suspension of parasites was injected intraperitoneally into each of a series of healthy, nonpregnant albino rats weighing between 100 and 150 gm. After twenty-four hours, the experiment animals usually developed an infection of about 100,000 or more parasites per cubic millimeter of blood, and if left untreated they generally died a few days later. The injection of the drug to be tested was carried out as follows: The substance was dissolved in distilled water, and the concentration so adjusted that the volume of each dose was 1 c.c., which was injected intravenously or intramuscularly by means of a record syringe. For injection were selected rats showing between 150,000 and 200,000 trypanosomes per cubic millimeter of blood, as a uniform grade of infection is very important for accurate work. The dose that reduced the parasitic count within twenty-four hours to a trace or negative was considered as the minimum effective dose. Voegtlin and Miller suggested that the blood be again examined at the end of forty-eight and seventy-two hours after injection. But, for greater accuracy, we extended our observation to seven days. The minimum effective dose remained remarkably constant for each of the three organic arsenicals throughout the six series of experiments. With the exception of Series 1, in which

6 mg. was required, 4 mg. per kilogram of arsphenamin was generally sufficient to keep the animals free of parasites throughout the period of observation, seven days, and in one case, in Series 3, even 2 mg. proved sufficient. Equally consistent results were obtained with neo-arsphenamin; 6 mg. always proved efficacious, while out of the eight injections of 4 mg. per kilogram, those in Series 2 and 4 kept the animal sterile throughout the period of observation, while those in Series 3 and 6 kept the number of parasites down to a trace or nil for from five to six days. Of sulpharsphenamin, 14 mg. was insufficient to sterilize the animal within seventy-two hours. Out of fifteen such injections, only five proved sterilizing for three days, while 18 mg. per kilogram almost always kept the animal sterile during the period of observation, there being only one or two exceptions. Thus, the minimum effective dose for arsphenamin is about 4 mg. per kilogram; for neoarsphenamin, from 4 to 6 mg., and for sulpharsphenamin from 14 to 18 mg. Moreover, comparing any trypanocidal value of these compounds on the basis of their arsenic content, the ratio will be about the same, namely $4 \times 0.30 = 1.2$ mg.; $6 \times 0.20 = 1.2$ mg., and $18 \times 0.22 = 3.96$ mg., or, approximately, 1: L: 3. In other words, the minimum effective dose of sulpharsphenamin contains more than three times as much arsenic as either arsphenamin or neoarsphenamin. Taking the chemotherapeutic Maximum Tolerated Dose—index, as the criterion of Minimum Effective Dose—therapeutic efficiency, sulpharsphenamin based on trypanocidal tests is considerably inferior to arsphenamin, and at most one-half as efficient as neoarsphenamin. The trypanocidal efficiency of sulpharsphenamin is practically the same, whether administered intramuscularly or intravenously.

METABOLISM AND REFLEX IRRITABILITY IN ANESTHESIA

Arthur E. Guedel, Indianapolis (*Journal A. M. A.*, Nov. 29, 1924), concludes his paper as follows: A just consideration and reflex irritability curve throughout the various ages of life, plus the influence of hyperpyrexia, emotional excitement and pathologic toxemia on this curve, will enable us better to anticipate probable anesthetic difficulties, and to plot the course and method of anesthesia for each case. Preanesthetic medication must be directed toward the reduction of the metabolic and reflex irritability curve to a base line standard. The dose and combination of drugs must be dependent on one element, namely, the reduction of the metabolic and reflex irritability curve. This is to be accomplished through: (1) physiologic metabolic depression, and (2) depression of psychic activity to the same purpose.

THE USE OF EXTRACTS OF THE PITUITARY GLAND IN OBSTETRICS

According to J. Whitridge Williams, Baltimore (*Journal A. M. A.*, Nov. 29, 1924), the use of pituitary extract in obstetrics should not be considered as harmless, since we are dealing with an extraordinarily potent agent, which is as yet imperfectly standardized. Williams regards as somewhat dubious its use in the treatment of prolonged labor even under the most favorable conditions, and as extraordinarily dangerous in the presence of disproportion or of malposition of the child. Its greatest field of usefulness is in the prevention and control of antonic hemorrhage following the third stage of labor, while it is relatively efficient in the induction of labor during the last weeks of pregnancy.

THE JOURNAL

OF THE

Missouri State Medical Association

JANUARY, 1925

EDITORIALS

PREVENTING CHRONIC DISEASE

The development of laboratory diagnosis as a supplement to the work of the clinician has been a constantly advancing feature of medical progress. At first, only a few routine tests were in use. Urine was examined. Feces and gastric contents were sometimes sent to the laboratory. After a time, the morphologic study of the blood was found to be useful and differential and numerical counts were asked from the pathologist. Tissue diagnosis by microscopic means was found valuable. Bacteriology coming in began to establish the necessity for real laboratory equipment and trained men to do this work. Then came the Wassermann test, which paved the way, more than anything else, for the establishment of the clinical diagnostic laboratory. The preparation of vaccines, complement fixation tests, blood chemistry, metabolic rate determination, all have contributed to the multiple duties of the skilled laboratory worker. Moreover, the close association of the diagnostic value of the X-ray, particularly in diseases of the chest and gastrointestinal tract, have made it practical to combine, to a certain extent, the clinical pathological and the diagnostic X-ray field for the proper study and interpretation of a given case. As, for example, the laboratory study of the gastric contents, bile, feces and blood in gastrointestinal cases and the chest in syphilis, where only too frequently an aneurysm or dilated aorta is found to supplement a positive Wassermann reaction; or as when physical findings are checked up by the X-ray film in tuberculosis.

All these developments in laboratory work are now so well understood that every hospital is prepared to furnish such a service as is above outlined. But the difficulty of hospitalization of the patient for such service still exists; and, while hospitals are very necessary for the care of the sick and ideal for the study of our patients, nevertheless we know it is sometimes impossible to get a man or a woman into a hospital unless they are acutely ill. Time and expense. These are the two great factors

that we are up against in doing what we would like to do in the care and study of our cases. We must possess a middle ground that is more than a few routine tests to meet a given emergency, and less than the more protracted study of a case that has gone on to the point where the hospital has become a necessity. Let us consider the need for such a middle ground procedure.

The practice of medicine, we must all realize, is changing decidedly—and not slowly. We have to move fast to keep up with it. As a matter of fact, many of us plug along a lap or two behind the mass of people we are supposed to lead. Acute infectious diseases are not only diminishing but some of them practically disappearing. Positive malaria smears and diphtheria cultures and Widal reactions which used to litter our laboratories are now infrequent enough to excite our interest. On what then must we direct our efforts? Chronic disease; the diseases due to age and stress and the wear and tear of life, we must always have with us. But here again, just as by intelligent approach we have stopped to such a marked extent the so-called preventable diseases, can we not help to *hold back* the chronic conditions that must, sooner or later, come; or at least recognize them early enough to allow our patients to live with them wisely and thus prolong their span of life? A good slogan then is: "Get the chronic disease before it gets you."

When does the patient come to you for arteriosclerosis, for chronic nephritis, for diabetes? Usually when these conditions are so advanced that he has become a semi-invalid. Only too frequently are you called in by a heartbroken family when apoplexy, uremia or coma has made necessary the presence of some one who can legally sign a death certificate.

Men and women in middle life must be taught to submit themselves to physical examination. They must be taught that by modern methods of physical and laboratory and X-ray examination the condition of the heart, the blood vessels, the kidneys, the lungs, the pancreas, can be definitely determined and early changes detected and checked. They must be taught that this can be done without their going to a hospital if they will consult with their physician early enough and with some degree of regularity.

It is to supply this need that group clinics have sprung up and that diagnostic laboratories that supplement the work of the physician have arisen. The need of properly organized institutions of this sort is more and more being recognized. From an economic standpoint, the patient can be given adequate service for

a reasonable fee and without loss of time to any extent. Between the very rich to whom time and money mean nothing, and the very poor who are well provided for by the unlimited charity clinics and free hospital beds, which never seem to be lacking, is the great mass of the middle class who are entitled to the best of service at reasonable rates. And it is to this great class that such institutions as the group clinic and diagnostic laboratory, when they are so organized that complete study of a case can be done at a reasonable fee, should appeal as supplementary to the work of the family physician and general practitioner.

LEGISLATIVE PROGRAM

At a meeting of the executive committee held in St. Louis December 17, questions affecting medical practice and the public health were discussed and several amendments to the practice act were advocated. The executive committee approved certain proposals and referred them to the committee on health and public instruction for preparation and introduction. The proposed amendments are:

1. Requiring every applicant for a license to practice medicine to show evidence of having attended four terms of nine months each and of having received a diploma from a reputable medical college of four years' requirements.

2. Requiring an applicant for license to attain a grade of 70 per centum on each question asked in the examination.

3. Authorize the state board of health at its discretion to accept the certificate of the National Board of Medical Examiners in lieu of its own examination for determining the qualifications of the applicant for license.

4. Authorize the board at its discretion to establish reciprocal relations with other states.

5. Make violation of the practice act a felony instead of a misdemeanor with a maximum penalty of two years in the penitentiary.

6. Authorize the board of health to investigate violations of the practice act and to initiate proceedings against the offenders.

7. Enlarge the definitions of unprofessional conduct as causes for revocation of the license.

The purpose of these amendments is to make it more difficult for unqualified persons to obtain a license from the board and in this way further protect the people from imposition. As the law reads now the state board of health is practically compelled to admit to the examination for a license any person showing evidence of having a certificate of graduation

from a high school and of having received a diploma from some reputable medical college of four years' requirements. Nowhere does the law require evidence that the applicant attended the course as prescribed by the college. Amendment No. 1 would correct this defect.

Amendment No. 2 definitely requires the applicant to answer 70 per centum of the questions asked on each subject at the examination. At present the law is not specific on this point.

Amendment No. 3 is a new provision and a highly desirable addition authorizing the board to accept the certificate of the National Board of Medical Examiners. The certificate of the National Board is acknowledged by all authorities as evidence of having passed a much more rigid and comprehensive examination than that of our own board or of any other state board. It is, therefore, manifestly unfair to our young men entering practice in Missouri to require them to pass an examination by our board after having received the certificate from the National Board and yet, as the law now reads, our state board has no power to recognize the National Board Certificate.

Amendment No. 4 reenacts the law in force some years ago granting discretionary power for the board to establish reciprocal relations with other states having equal requirements for examination. There has been much dissatisfaction among physicians in Missouri on account of this defection in our laws.

A very important clause is Amendment No. 5 which makes it a felony to practice medicine without a license and provides a maximum penalty of two years in the penitentiary. At present the law classifies the violation of the practice act as a misdemeanor, the maximum punishment being a fine of \$500 and imprisonment in the county jail for one year. Courts and juries are loath to assess the maximum punishment unless the crime is an aggravated one and the attempt to treat the sick by unlicensed persons has not been regarded by the majority of people as a very serious offense. The disclosures incident to the exposure of the medical diploma mills in Missouri and elsewhere however aroused the people to a realization that the traffic turned loose upon the public very many persons who constituted a real menace to the health of the people. The fear of a term in the penitentiary for violating the medical practice laws will be a far greater deterrent than a fine and jail sentence.

Amendment No. 6 clothes the state board of health with some real authority in protecting the health of the people by empowering the board to investigate violations of the law and initiate criminal proceedings against the culprits. The board has felt its weakness in this

respect for under our present statute prosecution must be started by private citizens in the county where the violation occurs. What is everybody's business is nobody's business, consequently vigorous efforts to prosecute and punish unlicensed persons for practicing are rare. Members of the reputable medical profession and the county health officers have been the principal prosecutors against such persons but their efforts are always weakened by cries of "jealousy, medical trust, attacking the underdogs," and similar whining appeals to the prejudices and sympathies of courts and juries that usually result in freeing the offender or assessing a small fine.

Amendment No. 7 will enable the board of health to revoke the licenses of practitioners who have been convicted of crime or who solicit patronage by circulating advertising matter that is false, misleading and deceptive. At present the law does not mention these offenses as grounds for refusal to issue a license or for the revocation of a license. The adoption of this amendment would make amenable to the board's action that large class of persons who distribute handbills and circulars lauding themselves as experts and specialists. They cannot use the mails for this purpose because they know that the post office authorities would soon stop them on account of the fraudulent and deceptive nature of their statements.

Every member of the Association is urged to study these amendments and explain to representatives in the legislature the necessity for their adoption.

ONE HUNDRED THOUSAND DOLLAR DEPARTMENT OF RADIOLOGY FOR ST. LOUIS CITY HOSPITAL

The recent enlargement of the department of radiology of the St. Louis City Hospital should be a source of great satisfaction to the physicians of that city in particular, and to the medical profession throughout the state.

After a thorough investigation of the needs of the department, Mr. Nelson Cunliff, Director of Public Welfare of St. Louis, secured the sum of \$80,000 for this work from the bond issue committee appointed to supervise the expenditure of the \$87,000,000 bond issue recently voted for public improvement.

A separate three-story building, known as the Radiology Building has been provided for this purpose. In all twenty-two rooms are provided for the work of the department; nine complete X-ray units are in use and a radium examination plant, with 545 mg. of radium, has been provided for the treatment of malignant disease. An adequate personnel of six-

teen individuals has been provided for the efficient administration of the department.

The department is equipped to do all types of radiological work, both diagnostic and therapeutic. Approximately 30,000 films are taken annually and between 2,000 and 2,500 gastrointestinal examinations are made each year. Facilities for the carrying out of any special X-ray procedure are provided; localization and removal of foreign bodies under the fluoroscope; pneumoperitoneum examination; bronchoscopic and esophagoscopic examinations under fluoroscopic guidance; fluoroscopy of the kidney at the operating table to determine if stones are present, etc. A special room is provided for cystoscopic examination and a special X-ray cystoscopic table permits the radiographing of a patient while on the cystoscopic table.

A special fracture table has been provided which will permit the reduction of fractures by extension apparatus while under direct fluoroscopic vision. The apparatus is so arranged that two views of the fracture at right angles to each other can be secured without disturbing the position of the patient and while he is still under extension. After proper reduction a plaster cast can be applied without disturbing the patient. The X-ray units used for this purpose are contained in small metallic boxes, transformer, tube and all, immersed in oil.

A special feature of the department is its twenty-four hour emergency and fracture service. Technicians are on duty day and night for the examination of such patients and any such emergency case can be examined and the plates available for the physician within a few minutes.

The record system has been worked out with a view to the future usefulness of the vast material collected at the institution. It is the intention of the department to preserve the films for all time, since valuable data may be secured from them when patients are re-examined in the future. A cross index system of diseases embracing several thousand films will provide a valuable encyclopedia of pathological plates. This when completed will be available for study to all physicians.

An accurate record of the cases treated with radiation is being kept with a cross index system which in time should give valuable information as to the value of radiation therapy in disease.

Mr. Nelson Cunliff, Director of Public Welfare of the city, Dr. G. A. Jordan, Hospital Commissioner, and Dr. E. A. Scharff, Mr. Kinsey, Mr. Bowen, and Mr. Christopher of the Department of Bridges and Building are to be congratulated on their achievement. Mayor

Kiel, the Board of Aldermen and the bond issue committee are to be commended for their far-sighted policy in providing adequate facilities for the treatment of the sick in this important branch of medicine.

VERNON COUNTY HEALTH WEEK

With the motto, "Keep Well People Well," the people of Vernon County conducted a health week November 3-7, 1924, which we are informed attracted a large number of people and resulted in the dissemination of the proper sort of information concerning disease and disease prevention. We are convinced that this outcome was due to the ideal method of conducting the affair for the direction of the activity was under the auspices of the Vernon County Board of Health, Vernon County School System, Vernon County Farm and the Vernon County Medical and Dental societies.

Good health is a blessing that every person wants to enjoy and good health is a blessing that every child has a right to expect from its parents. When a person's health is impaired or his child suffers an attack of disease the sufferer seeks the quickest method, or what he thinks is the quickest method, for restoration. Nearly always he goes to his family physician; sometimes he tries this, that or the other concoction recommended by his friends, advertised in the newspapers, or falls victim to the quack or charlatan who blatantly promises a sure cure.

Reputable physicians have always realized that it is one of their chief duties to the public to prevent disease but until the development of bacteriology and the knowledge of combating disease with antitoxins and serums the physician himself was unable to prevent the spread of infection. Today the story takes on quite a different aspect for with our knowledge of how disease develops and the methods of fighting it when it does attack, as well as our knowledge of how to prevent it, lays upon us a very special responsibility and that is to teach the people how they can live and enjoy good health and their children live and grow up without the handicaps of physical and mental defects that afflicted so many of the present and past generations.

With this purpose in view the Vernon County Health Week devoted five days of instruction to all who cared to listen on the means and methods that they can pursue in keeping themselves and their children well.

The program for the week in condensed form is published in another column.*

*See page 43.

MASSACHUSETTS WILL MAKE SWEEPING CHANGES IN MEDICAL LAW

One of the results of the St. Louis *Star* expose of the diploma mills last year was the awakening of state examining boards to the realization of the lack of protection against imposters found in the laws of many states. These defects are being corrected as rapidly as possible. Arkansas, Connecticut, Oregon and other states where deplorable laxity was found in controlling medical licensure are making earnest efforts to prevent a repetition of the disgraceful condition disclosed. In our own state the restoration of the word "reputable" to the medical law gave the board of health power to supervise medical colleges that had been taken away from it in 1921. Recent dispatches in the newspapers announce that Massachusetts has awakened to the serious conditions in that state owing to its lack of power to control the practice of medicine. At the last session of the Massachusetts legislature a committee was authorized to make a study of professional conditions. This committee in reporting stated that it found conditions below standard not only in the medical profession but also in other professions and trades and recommended:

Creation of a new board of registration of seven members, each representing a distinct profession or trade.

Abolition of the present office of director of registrations. (Ten separate licensing boards now wielding full powers, would become examining boards only.)

Full power be granted to the new board to examine into the standards of educational institutions which issue professional licenses.

Continued outlawing of chiropractic.

Withholding of licenses for midwifery.

Vigorous prosecution of persons now practicing chiropractic and midwifery.

It is stated that there were two dissenting votes to the majority report of the committee and that a bitter fight is anticipated when the recommendations come up for action in the Massachusetts legislature.

THE AMERICAN BOARD OF OTOLARYNGOLOGY

The American Board of Otolaryngology was organized in Chicago on November 10. The following constitute the board of directors: Drs. Harris P. Mosher, Boston, president; Frank R. Spencer, Boulder, Colo., vice-president; Hanau W. Loeb, St. Louis, secretary and treasurer; Thomas E. Carmody, Denver; Joseph C. Beck, Chicago; Thomas H. Halsted,

Syracuse, N. Y.; Robert C. Lunch, New Orleans; Burt R. Shurly, Detroit; Ross H. Skillern, Philadelphia; William P. Wherry, Omaha. The office of the Board is at 1402 South Grand Boulevard, St. Louis, Missouri. The board comprises representatives of the five national otolaryngologic associations; the American Otological Society, the American Laryngological Association, the American Laryngological, Rhinological and Otological Society, the American Academy of Ophthalmology and Otolaryngology and the Section of Laryngology, Otology and Rhinology of the American Medical Association. The object of the association is to elevate the standard of otolaryngology, to familiarize the public with its aims and ideals, to protect the public against unqualified practitioners, to receive applications for examination in otolaryngology, to conduct examinations of such applicants, to issue certificates of qualification in otolaryngology and to perform such duties as will advance the cause of otolaryngology. The first examination will be held at the time of the meeting of the American Medical Association.

NEWS NOTES

Governor Hyde has appointed Dr. G. A. Auerswald, De Soto, State Food and Drug Commissioner.

The prosecuting attorney of Randolph County has filed charges against chiropractors in that county for practicing medicine without a license.

The State Board of Health at a meeting held in Jefferson City, December 10, issued licenses to practice medicine to twenty-four applicants.

It is reported that Dr. G. E. Jacobs, 1332 Franklin Ave., St. Louis, was arrested by general agents at St. Louis, December 17, charged with selling narcotics illegally.

Dr. H. G. Lund, St. Louis, was a guest of the Benton County Medical Society meeting held at Lincoln, December 3, and read a paper on "Stricture of the Ureter," accompanied with X-ray pictures.

Members will be grieved to learn that the wife of Dr. George Dock, Pasadena, California, formerly dean of the Washington University Medical School, St. Louis, died at their home in Pasadena, December 2, following an operation for the removal of her tonsils.

Placarding homes to warn visitors from pneumonia cases has been ordered by the health commissioner of East St. Louis, Illinois. The report states that there are a number of cases of lobar pneumonia in that city and the commissioner hopes by quarantine to prevent its spread.

Governor Hyde has appointed Dr. James Stewart, St. Louis, a member of the State Board of Health to succeed Dr. R. S. Vitt, St. Louis, recently elected Coroner of that city. Dr. Stewart is Director of Hygiene of the St. Louis Public Schools, a position he has held for a number of years. He was a member of the state legislature in 1905.

Dr. Richard L. Sutton, Kansas City, has presented a collection of African trophies to the University of Missouri. Dr. Sutton recently returned from an expedition into Africa, representing the University Department of Natural History. The collection includes a wide variety of weapons, implements, domestic articles and clothing.

Dr. Max Starkloff, Health Commissioner of St. Louis, advocates a six months term in jail for persons who catch smallpox or, as he says "allows smallpox to catch them." In an address before the Optimists' Club, St. Louis, December 11, he told the members that it cost the city more than \$150 to care for every case of smallpox while to prevent the person from taking the malady it cost only 4 cents.

The 53d General Assembly which convenes at Jefferson City in January, 1925, will have among its members six physicians, one in the Senate and six in the House. The senator is Dr. Guy M. Mitchell, of Branson, Taney County, who was a member of the House from his county in the 48th General Assembly, 1915, and reelected in 1917. The physicians in the House are: Drs. J. D. Dunham, Pattonsburg, Daviess County; J. W. Holaday, Tarkio, Atchison County; D. A. Pollard, Calhoun, Henry County; Richard Ray, Kansas City, Jackson County; Wm. H. Bailey, Perryville, Perry County. A. P. Drury, Bloomsdale, Ste. Genevieve County, is a veterinarian.

In addition to the physicians mentioned Mr. Jones H. Parker, of St. Louis, is a graduate in medicine as well as a practicing attorney. While Mr. Parker has abandoned the title of physician he still maintains a close relation with medical science being the owner and publisher of *Annals of Otology, Rhinology and Laryngology* of which Dr. Hanau W. Loeb, St. Louis, is editor. Mr. Parker is a candidate for Speaker of the House.

The United States Civil Service Commission announces an open competitive examination for medical interne (psychiatric). Applications for medical interne (psychiatric) will be rated as received until June 30, 1925. The examination is to fill vacancies in Saint Elizabeth's Hospital, Washington, D. C., at an entrance salary of \$1,860 a year. Applicants must have been graduated from a recognized medical college or be senior students in such an institution, and furnish proof of graduation within eight months from the date of making oath to the application.

Competitors will not be required to report for examination at any place, but will be rated on their general education, technical training, and experience. Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the board of U. S. civil-service examiners at the postoffice or customhouses in any city.

At a special meeting of the St. Louis Medical Society held December 11 a report of the Hospital Committee was heard and discussed. This report asked the Society to request certain alterations in the management of hospitals, such as granting the doctors and their families the same low rate for service as is allowed the profession of the clergy and nursing; that clinic patients be admitted to the free wards only after an investigation of their finances; that the hospital make no contracts with industrial concerns and refrain from advertising and that interns who fail to complete their terms in one hospital be barred from others. These resolutions failed of adoption. There was, however, a very earnest discussion of the necessity for hospital superintendents and medical practitioners to cooperate more harmoniously and intimately than has been done in the past and to this end a motion was adopted that such a meeting be arranged at an early date. It was freely acknowledged that there was abuse of the charity privileges in the hospitals and clinics and that the correction of this abuse would call for a much larger force of social workers than exists at present. In the discussion of the abuse of clinic service at Barnes Hospital, Dr. L. H. Burlingham, the superintendent, and other members of the hospital staff said there was an abuse of only two per cent, which it was stated was probably a lower percentage than existed in the majority of hospitals.

The following have been accepted for New and Nonofficial Remedies:

Hoffman-LaRoche Chemical Works: Secacornin, Thigenol.

Intarvin Company, Inc.: Intarvin.

Eli Lilly and Company: Ampoules Ouabain, 0.0005 Gm. (1/128 grain)—Lilly, Hypodermic Tablets Strophanthin 1/100 grain—Lilly, Hypodermic Tablets Strophanthin 1/120 grain—Lilly, Iletin (Insulin—Lilly) U-80.

Merck and Company: Benzyl Succinate—Merck.

Parke, Davis and Company: Ampoules Adrenalin Chloride Solution Rx 1, 1:10000, 1 Cc., Ampoules Adrenalin Chloride Solution Rx 2, 1:2600, 1 Cc., Ampoules Adrenalin Chloride Solution Rx 1000, 1 Cc.

Sharp and Dohme: Hypodermic Tablets Strophanthin (1/200 grain)—S. and D. Ergotole, Ampoules Ergot, 1 Cc.

E. R. Squibb and Sons: Insulin—Squibb, 10 Units, Insulin—Squibb, 20 Units.

Swan-Myers Company: Sterile Ampoules Mercuric Potassium Iodide, 0.017 Gm., (1/4 grain)—Swan-Myers.

Synthetic Drug Company, Inc.: Compressible Capsules Mercury Salicylate "Synthetic," 1 grain for Intramuscular Injection; Compressible Capsules Mercury Salicylate "Synthetic," 1 1/2 grains for Intramuscular Injection; Compressible Capsules Mercury Salicylate "Synthetic," 2 grains for Intramuscular Injection.

BOOKS FOR LEISURE MOMENTS

*Reading with discrimination broadens the mind
and strengthens the mental grasp*

That this is the age of prevention in the medical world is clearly brought out in Dr. S. Calvin Smith's latest book "How Is Your Heart?" (Boni and Liveright). A book to appeal to the average reader for it is written in a readable, snappy manner combining a true literary skill with scientific knowledge. It is a small book, easy to slip in the pocket and should be slipped into the pocket of both young and old for it is a book on prevention as well as cure. The index is cleverly arranged so the tired business man, as well as the equally tired and busy housewife may scan the list and find the subject most suited to their case, without reading the entire book.

Dr. Smith stresses the point of over-eating and brings out clearly the harm that can be done by indulging our appetites. He gives a dig at the food commercialism so predominate today and says that the "eat more crowd" should admonish us to eat less that we may patronize them longer."

The tonsil and teeth question in relation to the heart each have a chapter of their own.

His chapter on tonsils is especially interesting for he shows the layman the harm as well as the good the tonsils do. The idea is prevalent today among lay people that the doctor's first guess is, "tonsils out." Dr. Smith helps the patient to understand the reason the tonsils should come out and the reason they were given to us. In his chapter on teeth he shows the effect abscessed teeth have on the heart and the absolute cooperation that must exist between the doctor and the dentist.

The author takes the panic and the terror out of heart disease by showing the patient how to live after the damage is done as well as how to keep from doing the damage. He gives the reader credit for a certain amount of intelligence, which is something very few of the scientific writers of today do, so perhaps we can forgive him if he does not stress the periodic physical examination more. We, as intelligent human beings, should have enough sense to have this done without being reminded of it on every page.

Taking the book as a whole there is very little the author has not touched upon, yet the book is not large—some two hundred pages. It is remarkable how much comprehensive information he crowds into those few pages. The subject matter is presented in such a readable style with so much humor interspersed throughout the chapters that an instructive as well as an enjoyable time may be spent while perusing its pages.—P. B.

MISCELLANY

WILLIAM F. KUHN, M.D.*

ROBERT McE. SCHAUFFLER

William F. Kuhn was born on April 15, 1849, at Lyons, New York. His father and mother were natives of Alsace, France. They came to this country in the late 20's and were married in this country. Along in the late 50's the family came to Michigan and homesteaded a farm near Vicksburg. The farm is still in the possession of the family. There were eleven children and three survive.

Dr. Kuhn graduated from Whittenberg College, Springfield, Ohio, in 1875, and taught school in DeGraff, Ohio, until 1881. He was married in 1878 to Miss Elizabeth Willson. He graduated from Jefferson Medical College in 1883 and started practicing medicine with Dr. M. A. Koogler in Eldorado, Kans. His wife died in 1885 and in 1886 he came to Kansas City. Here he was for years professor of physiology at the Western Dental College, professor of physiology at the University Medical College and later professor of nervous and mental diseases at the old Medico-Chi College. In 1905 when this college was fused to make the medical department of the University of Kansas he became assistant professor of nervous and mental diseases in the new

school. Last year he voluntarily retired from that position. In 1905 he was appointed by Governor Folk Superintendent of the Asylum for Insane at Farmington. He was there for two years and was transferred by Governor Folk to the State Asylum at St. Joseph. He remained there two years and resigned, due to interference of the asylum board with his employees. Dr. Kuhn refused to qualify an attendant in the care of the insane who could only boast of having voted the Republican or Democratic ticket. This led to a serious breach with the board and he was dismissed. The matter was taken to the courts later and he was completely exonerated, paid all the back salary at the end of his term and offered the position again, which he refused. He came back to Kansas City and took up his work at the University of Kansas and limited his practice to that of nervous and mental diseases. In the later years of his life he devoted a great deal of time to Masonry, particularly the Royal Arch degrees, and reached the highest rank which it is possible to attain.

Dr. Kuhn passed away quietly in his sleep the night of September 1, 1924. His grip was packed and he was ready to leave for Portland, Maine, where he was to preside over the annual conclave of Royal Arch Masons.

The funeral services in Kansas City were characterized by a remarkable attendance and by all the pomp and ceremony which it was possible for the Masonic orders to bestow on their most honored member.

Dr. Kuhn was a distinguished physician. He had a scientific mind. His love of physiology was notable and for years he lectured on this, the most neglected subject in the medical curriculum. Anatomy and physiology are the corner stones of medical science. Most of us have given much attention to the first and sadly neglected the second. Dr. Kuhn was thoroughly grounded in the intricate subject matter of his specialty of neurology. His examination was careful and his reasoning accurate. In his scientific methods he was a doctor of the new school.

Yet he was of the old school in his attitude toward the patient. He considered the whole man; his dreams and ambitions, his hopes and fears, his loves and hatreds. He never forgot that he was dealing with a human being and not merely with an intricate machine.

He had a splendid enthusiasm for his specialty. When I was attending Columbia University I had the privilege of being a student assistant to Dr. M. Allen Starr, Professor of Neurology. He was a man of independent means and much sought after in society. But Dr. Starr was just brimming over with enthusiasm for neurology. Every clinic case seemed of great importance to him and he was never too busy to talk neurology to the humblest student who was at all interested. I had occasion to see Dr. Starr a number of times years afterward and always thought him the youngest and happiest man I knew at his age.

When I came home to Kansas City to practice, Dr. Kuhn was an outstanding figure among the doctors who had offices in the Deardorff Building and I recognized in him at once those qualities which had so attracted me to Dr. Starr.

Dr. Kuhn was non-commercial. He did not need to be bound by any pledge of medical ethics. A man by nature modest, generous and with a high sense of honor, it followed as a matter of course that he should give his patients and his fellow

practitioners a square deal. After all is said, medical ethics are merely the application of the golden rule to medical practice and it is too bad that many unthinking people and some doctors have misunderstood them to be the selfish rules of a medical trust.

Dr. Kuhn was an organization man in medicine. He attended meetings even if they were not of special interest to him. He was a worker, always ready to take some time and trouble for the good of the order. For many years he was treasurer of the Jackson County Medical Society and conducted its financial affairs with care and accuracy.

In thinking of the man rather than the doctor, it seems that his dominant characteristics were Idealism, with its handmaiden, Enthusiasm. He had the zeal of a preacher, the fire of an orator, the patience in exhortation of a successful teacher.

He had an outside interest, beyond his profession and his family. Every man ought to have a fad; an outside interest to occupy his idle moments and to bring the refreshment of change of occupation. He is fortunate indeed who has more than one and doubly fortunate if one of them be an interest in some great constructive movement or some virile idealistic organization. Dr. Kuhn was a great Mason. It would be hard to estimate just how great a joy this was to him or how great an inspiration his devotion was to other members of the order. It certainly brought him many friendships and much honor.

How shall we appraise the value of a life? There is first the biological or economic standard. Did he produce more than he consumed and so leave the world a little richer? Did he rear children above the average in intelligence, education and character? Did he respect the rights of his neighbors and pay his dues to his community? The life which fulfills these obligations is not a failure but has contributed to the advancement of the race. There is a greater success than that measured by the biological standard. It is well illustrated by the life of William F. Kuhn.

First there was the contribution which he made in common with so many of our profession, that of adding some facts to the sum total of human knowledge and of healing the bodies of other units of society that they might be able to carry out their biological duty.

But it is written, "man shall not live by bread alone," and again, "the lonely of heart shall wither away." Patients may not always be cured by medicine and surgery. There is an alchemy in a smile which the chemist cannot estimate. There is a healing in the touch of a loving hand which has a divine potency. There is a transference of courage and will power by some psychic radio which the materialist cannot measure.

The wealth of the Jackson County Medical Society is in the character of its members. We have a rich legacy in the example of many of those who have gone before. We of the present need often to pause and bow our heads, not only to honor them, but to receive their benediction.

In the Memorial Abbey of this society I lay this tribute to William F. Kuhn, scientist, friend and preacher of righteousness. If I have been able to hold the mirror to his life it should glow with the pure, deep, beautiful fire of some precious jewel; a reflection of the enthusiasm, the idealism of the living man.

Of his life we might say, as Whittier did in "My Namesake":

"Strong manhood crowning vigorous youth;
Life made by duty epical
And rhythmic with the truth,
So shall this life that fruitage yield
Which trees of healing only give
And green leaved in the Eternal field
Of God, forever live."

—*Bulletin, Jackson County Medical Society.*

JEFFERSON DAVIS GRIFFITH, M.D.* HAL FOSTER

Fellow members, Sisters and Nurses: It was a source of real sorrow to every one present here this evening when our friend, Dr. Griffith, passed away a few days ago.

Dr. Griffith was the son of General Richard Griffith. He was born in Jackson, Miss., February 12, 1850. The war between the states began when he was a youth. His father, Gen. Griffith, was a graduate of West Point and was killed at the battle of Shiloh. His brother was also killed during this battle. Both were soldiers in the Confederate Army.

He attended the schools in Jackson. When the cruel war was ended, he entered the medical department of the University of New York, then located at 410 East 26th St., just across the street from Bellevue Hospital. By the generosity of Carnegie and Rockefeller the fine new building is now at 1st Avenue and 26th St., still across the street from Bellevue Hospital. In the old dissecting room in very large letters on the wall was the following: "All was made holy for some sacred use." The students were urged to be respectful and gentle in dissecting. Profanity, smoking and vulgar stories were not tolerated. James, the head janitor, was there and saw that the orders were faithfully obeyed. During his student days the University and Bellevue had a brilliant group of teachers and visiting physicians and surgeons. I don't believe the world ever saw a more distinguished and able set of teachers in one group, indeed it was a galaxy of teachers, and they made lasting impressions upon the students. They were all clinical students; when they walked the wards they were able to say this patient's trouble is so and so. They were such students of disease that they rarely were mistaken. I will name a few of this immortal galaxy: Wm. H. Thompson, Alfred Loomis, Thomas, Wm. Darling, Wm. Hammond, J. R. Wood, the two Flints, Doremus, Draper, Gouley, Bumstead, Keys, Roosa, Noyes, J. W. Wright, Sayre Post and many others. Well might Dr. Griffith say he attended these men's lectures. Dr. Griffith graduated from the University of New York before he was 21 years old. He stood a competitive examination for internship at Bellevue Hospital and served as house surgeon for two years at that institution. His fellow interns were Drs. J. D. Bryant, Bull and Polk. When he graduated the exercises were held on 14th St. in the Academy of Music. Dr. Wendell Holmes handed him his diploma. He located in Kansas City in 1872.

He married Miss Sallie Comingo of Independence, daughter of Mr. Comingo, a prominent lawyer, judge and former congressman of this district. Dr. and Mrs. Griffith had two children, Dr. Comingo, a member of this staff, and Miss Lucy, who died a number of years ago.

He became a staff member of St. Joseph's Hospital soon after locating here, when the hospital was young and he was faithful to it all his life. Had he

*A tribute read before the Staff of St. Joseph's Hospital, September 8, 1924.

lived until October next, he would have been a member of this staff for fifty years, most of that time its Chief. The good Sisters and staff would have given him a celebration had he lived. He always remembered his old teachers and spoke of them in the highest terms. Frequently we remember our teachers not by what they taught us, but by what they were themselves. Dr. Griffith never lived in the anteroom of life. He realized that today and now was his and the time to live, to do and serve his fellowman was now.

He was honored by his state medical society and became its president. The Kansas City Academy of Medicine and the Jackson County Medical Society made him their president. The National Association of Military Surgeons made him their president. He was also president of the Missouri State Health Board and the National Guard of Missouri. During the war with Spain he was chief surgeon of 1st Army Corp U. S. V. During the World War he was president of advisory board which met at this hospital and examined hundreds of men free of charge. He is the third member of this staff to die recently.

His judging of physicians was never with a critical temper. He realized that all men were different and remembered the mystery of personality. He was always trying to encourage young physicians and build them up. No one could imagine Dr. Griffith voting to keep some bright young surgeon from becoming a member of this staff or prevent him from joining any of the local medical societies simply because he was a surgeon and might get some of the surgical practice. He always endeavored to keep abreast with the new methods constantly coming out in medical practice. For many years he conducted a general surgical free clinic on Saturday afternoon at the Kansas City General Hospital for the sick poor. He was strong and true, was generous in praise and appreciation of other surgeons, he was always giving without expecting any return from others, he practiced humility, tolerance and self restraint, he made the best use of his time and opportunity, he kept his mind pure and his judgment charitable and extended intelligent sympathy to those under his care in distress. He always maintained a high standard of thought, purpose, conduct and foresight, he grew in grace, goodness and gratitude, he sought truth and righteousness to work, live, pray and serve daily his fellowman. He aspired greatly, labored and assisted those who sought his aid cheerfully and took God at His word and traveled heavenward. His mind was filled with strong, constructive, productive thoughts. Happiness was his habit. He had a pleasing and forceful personality which attracted and kept his friends, a uniformly courteous and gracious manner. He was always enthusiastic about life and its problems. It was his rare privilege and opportunity to render helpful service at every opportunity, he was always ready to assist the young medical men, many of them assisted by helpful service at every opportunity. Dr. Griffith stood on the stairway of life and saw great crowds ascending and descending to their destiny. He endeavored to uplift them. When he walked on the street he kept to the right, when he descended a stairway he kept to the right, when some man he had assisted showed ingratitude he kept to the right, when men failed him he kept to the right. He always kept to the right in his professional life. His daily life was filled with useful and interesting service to his fellowman. His life was worth while because he continued constantly to grow in spiritual power and purpose. Life is worth while to every man who renders service to others. He was con-

stantly unfolding in beauty the nobility of his character. His life was worth while because he was a servant of humanity in pain and he was striving to give relief. He met his responsibilities and obligations with confidence and unwavering faith. He was progressing in truth and righteousness. In spite of his personal sorrow he kept radiant and strong. Life is transcendently worth while if we are daily developing a deep consciousness of our personal alliance with God, our dependence upon Him, and the absolute assurance of His guidance and protection. Dr. Griffith thought and tried to give that bread which gives strength and the pure water that bids the thirsty live. He endeavored to assist the fainting day by day because he was sure he would not again pass this way. He wanted to give the oil of joy for tears. He longed to give to others hope and faith and tried to do all that the Master saith and aid all he could today on his way because yesterday is gone, tomorrow may never come. He was certain that he would never pass this way again. Dr. Griffith was a gentleman, who played fair in life's strenuous game. He was clean of mind, body and soul, he was courteous to friend and foe, he was too chivalrous to wound the feelings of others and too sensible to lower his respect for himself; his dreams and hopes were founded on the rock of determination, he met victory without boasting, defeat without bitterness, and all mankind with a smile. He loved his friends, his country and his God. He was a gentleman in every sense of that word. He had the physician's mind and saw the noblest things in the miracles of life.

When his spirit left this hospital a few days ago and took its flight to the God who created it, no doubt it was welcomed in heaven by Drs. C. Lester Hall, C. O'Connor, J. N. Scott and other former members of St. Joseph's Hospital staff. God makes all men; what a pleasure to know that our final judgment is with Him. Being such as we are we may well tremble before His tribunal, but the all-knowing is the all-living and He is righteous and all merciful.

WOMAN'S AUXILIARY

SECRETARY'S REPORT OF THE FIRST MEETING OF THE EXECUTIVE BOARD OF THE WOMAN'S AUXILIARY TO THE MISSOURI STATE MEDICAL ASSOCIATION

The first meeting of the executive board of the Women's Auxiliary to the Missouri State Medical Association was held in St. Louis, Wednesday, October 8, 1924, the president, Mrs. Geo. H. Hoxie, Kansas City, in the chair. Since the purpose of the meeting was to decide upon a program of work for the coming year, chairmen of county auxiliaries had been invited to attend and take part in the discussion. An invitation had also been extended to the executive board of the St. Louis Auxiliary to attend the conference.

The chairman of organization and the board of the St. Louis Auxiliary had made every possible arrangement for the comfort and pleasure of the out of town women. The meeting was held at the Claridge Hotel, where the board members and county delegates were the guests of the executive

board of the St. Louis Auxiliary at luncheon, and guests of the three resident state officers at dinner. From there they were taken to the Veiled Prophet's Ball, a gorgeous spectacle, which made a delightful close to an interesting and enjoyable, if strenuous day.

The plans for the day had been so inviting that the attendance at this first state board meeting was remarkable. The session opened at ten o'clock and continued until 12:30.

Mrs. Willard Bartlett, Chairman of Organization, reported that she felt the gratifying attendance of the members of the state executive board to this first meeting was the best report she could make of the progress of organization. Out of 22 board members, 18 were present and 18 counties were represented by their presidents. Since being in Springfield, Jefferson City, Kansas City, and Chicago, she had been in a number of counties to assist in local organization. During the summer many of the counties had had joint social meetings at the time of the men's organization meetings. There are at present presidents or chairmen designated in 50 counties. This work has been greatly facilitated by the hearty cooperation of Dr. Clark, President of the State Medical Association, and the presidents of the various county medical societies. Eighteen have reported their full lists of officers. As rapidly as a chairman of organization is named by the president of the county medical society, definite suggestions for procedure is sent her which she adapts to her own needs. This plan has given satisfaction. Counties holding organization meetings are always requested to invite representatives from surrounding counties and this has assisted materially.

In the near future she will appoint women in different parts of the state to assist in this work and as rapidly as possible effect a district organization. It was decided by vote that it was not desirable for the Auxiliary to join any other club than the Federated for this year.

The chairman said that she would call on the county presidents and representatives present, who had been doing work in their various communities, to complete her report by speaking briefly during luncheon of the progress of their work and their own activities. She added, in closing, that no matter what work of definite value the Auxiliary should undertake, its most important sphere was that of stimulating at all times the feeling of local cooperation and the spirit of understanding.

A recess was taken for luncheon at which the executive board of the St. Louis Auxiliary with Mrs. W. E. Fischel, the President presiding, acted as hostesses. The visiting and local women were seated alternately at a long T-shaped table in a private dining room, with covers for 42, the arrangements having been in charge of Mrs. Fred J. Taussig of St. Louis. During luncheon each of the visiting women were called on for brief reports, which were stimulating and entertaining and showed the interest with which the county auxiliaries are meeting.

The women from outside St. Louis attending were: Mesdames Geo. H. Hoxie, president, and J. G. Montgomery, Kansas City; Jos. W. Love, Springfield; John C. Parrish, Vandalia; Frank Gilham, Jefferson City; A. B. McGlothlin and J. F. Owens, St. Joseph; Guy L. Noyes, Columbia; G. B. Schulz, Cape Girardeau; Harry F. Parker, Warrensburg; C. T. Ryland, Lexington; H. S. Maupin, Shelbyville; M. P. Overholser, Harrisonville; W. M. Bickford, Marshall; T. Guy Hetherlin, Louisiana;

P. M. Baker, Memphis; C. P. Dyer, Webster Groves.

The President outlined what she believed to be the public health needs of the state, and the work based on these needs, which the State Auxiliary should undertake. (Published in the November issue of the Journal.)

Discussion by the members of the results of public health activities in the counties and localities which they represent, brought out the following points:

1. That the vital statistics of many of the cities and counties are inadequate; they are neither complete nor accurate and after being collected are not used.

2. That some one in the state should be finding out why Missouri's death rate from such preventable diseases as diphtheria, typhoid, and tuberculosis compares so unfavorably with the rate from such nearby states as Minnesota, Kansas, Wisconsin and Michigan.

3. That the first step in the improvement in health conditions in the state should be improvement in sanitary conditions; that results from intensive child welfare work will be many times multiplied if it follows the fundamental work of securing a safe water supply, a safe milk supply, a proper disposal of refuse, fly extermination and the like.

4. That the success of all public health work depends upon education. That this education cannot be done at long range. Only a small proportion of mothers read newspapers. Those who most need education do not read periodicals and do not join clubs. With this large majority education depends upon personal contact. The great need is the local health teacher and the teacher who can most quickly and effectively and economically reach and instruct the mothers, is the county public health nurse. Therefore, county health departments are the logical public health education agencies.

But trained county health workers are scarce. Our county workers need training. Such training can come only from a central state health department, working with, advising and helping the county health directors and nurses.

5. That private agencies and women's clubs are needed in public health work, but that they should work under the direction of trained public health officials.

At the close of the discussion resolutions were adopted expressing the unanimous opinion of the board. (Published in the November issue of the Journal.)

Mrs. M. P. Overholser, of Harrisonville, Chairman of Finance, asked for instructions for her committee. She was advised to notify counties to send to the treasurer as soon as possible the ten cents per capita tax. Any contributions to state expenses beyond this tax by the county auxiliaries were to be entirely voluntary.

She submitted the recommendations of Mrs. J. C. Parrish of Vandalia, a president and member of the finance committee, that a fund be started as a guarantee of the continuance of the expenses of the work in the future which the tax of 10¢ per capita could not cover. She offered the suggestion that the auxiliaries favorably situated make a contribution to be raised in a social way, such as an informal bridge party, the showing of a moving picture film, or better still the special film put out by the Social Hygiene Society, "The Gift of Life." The state treasurer would welcome the funds. She added that during the organization period the social aspect of the enterprise would also be helpful.

Mrs. Overholser stated that the Cass County Auxiliary had voted dues of \$2.00 per member, \$1.00 for local use and \$1.00 as a state contribution.

Mrs. E. T. Gibson, of Kansas City, Chairman on Education, was not able to be present, but her report was presented by two members of her committee, Mrs. Evarts Graham, St. Louis, and Mrs. Guy Noyes, Columbia.

The committee urged self education in local public health conditions by the county auxiliaries; that educational papers and addresses be given at auxiliary meetings based on studies of local conditions as well as about general public health matters. That information so gathered and presented be gotten before other county clubs and organizations at their regular meetings; that the sale of *Hygeia* be pushed, and that newspapers be used for general and local educational articles; that every possible means such as Baby Week, Baby Health Conferences, other health conferences, posters, etc., be used to create interest in health.

The committee offered tentative programs for county auxiliaries and material for programs. Requests for such help should be sent to Mrs. E. T. Gibson, 6425 Wornell Road, Kansas City. Mrs. Noyes is in charge of newspaper educational work and Mrs. Graham of the state-wide work for increasing the sale of *Hygeia*.

The corresponding secretary, Mrs. J. G. Montgomery, Kansas City, urged upon the county workers the necessity of answering letters from the president and chairman of committees. She asked each county auxiliary president to send her at once the list of officers and committee chairmen, copy of county constitution and by-laws, number of members, number of doctors' wives in the county eligible but not in the auxiliary, and plans for the year's work. As the result of a vote taken by mail, fifteen of the twenty-two board members had voted to instruct the president to apply for membership in the State Federation of Women's Clubs. The president announced that such application had been made. Mrs. Noyes, in discussing this plan, stated she felt this organization, in common with other groups to which we belong "by marriage," that is by virtue of our husband's professional association, must have definite features in order to bind it together successfully. She used as an example the faculty clubs of the various universities.

The following committee was appointed to nominate officers to be voted upon at the spring meeting: Mrs. Joseph W. Love, Springfield; Mrs. W. E. Fischel, St. Louis; Mrs. Frank Gilham, Jefferson City; Mrs. T. G. Hetherlin, Louisiana; Mrs. Guy Noyes, Columbia; Mrs. G. B. Schulz, Cape Girardeau; Mrs. W. N. Bickford, Marshall.

The president was instructed to appoint a committee to prepare amendments to the state constitution and to appoint the necessary committee to arranged for the May meeting in Kansas City.

BENTON COUNTY AUXILIARY

Meeting of November 12, 1924

The physicians of Benton County and their wives met at the home of Dr. and Mrs. J. M. Edwards, Cross Timbers, November 12, 1924, for the purpose of organizing the Benton County Woman's Auxiliary to the Missouri State Medical Association. Preceding the meeting a sumptuous dinner was served and the physicians of Benton County are beginning to wonder if they haven't been missing

something in the past by not having a Woman's Auxiliary in their county.

The meeting was called to order by Mrs. H. G. Savage, of Warsaw, temporary chairman, who outlined the purposes of the Auxiliary and the following officers were elected: President, Mrs. James A. Logan, Warsaw; first vice-president Mrs. J. M. Edwards, Cross Timbers; second vice-president, Mrs. E. L. Rhodes, Lincoln; third vice-president, Mrs. J. P. Van Allen, Cole Camp; secretary-treasurer, Mrs. O. L. Cuddy, Lincoln; program committee, Mrs. H. G. Savage, Warsaw.

On motion the meeting adjourned to meet in conjunction with the Benton County Medical Society at Lincoln, December 3, 1924.

Meeting of December 3, 1924

The Woman's Auxiliary of Benton County met in the directors' room of the Farmers' Bank at Lincoln, December 3, 1924. Owing to the inclement weather several of the ladies were unable to attend but what the meeting may have lacked in number was more than offset by the fine spirit of enthusiasm which prevailed.

The meeting was opened by the president, Mrs. Jas. H. Logan, and the minutes of the last meeting were read and approved.

A communication received from our state president, Mrs. Geo. H. Hoxie, Kansas City, was read and the problem of a constitution and by-laws was discussed but owing to the small attendance the president suggested that this subject be held over for the next meeting.

Mrs. H. G. Savage, Warsaw, gave a very interesting talk on vital statistics and child welfare which was thoroughly enjoyed.

Motions were made and seconded appointing Mrs. O. L. Cuddy as chairman of the education committee and Mrs. H. G. Savage, chairman of the legislative committee.

On motion the meeting adjourned and the ladies, availing themselves of the invitation from the Benton County Medical Society to participate in their meeting, retired to the meeting room and listened to a paper and X-ray demonstrations by Dr. Herluf G. Lund, St. Louis, which proved both interesting and instructive.

Mrs. O. L. CUDDY, Secretary-Treasurer.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, FOR 1925

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID THE STATE ASSESSMENT FOR ALL
THEIR MEMBERS)

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

One Hundred and Sixth Meeting, October 13, 1924

1. PRESENTATION OF CASES.

A. PYELITIS.—By DR. W. BELFORD.

Geo. C., 10 years old, was admitted August 24, with a complaint of fever, pain in abdomen, diarrhea and marked prostration. He had been well previous to August 10, but on that day began to vomit and the next day had vague abdominal pain and temperature was 105 degrees. Diarrhea began

the second day. All symptoms steadily became worse and prostration continued.

On examination he was quite prostrated, temp. 104, pulse 110, resp. 24, and there was a vague indefinite muscle spasm and tenderness in both costo-vertebral angles. The urine showed a heavy sediment of pus but no blood.

His temperature remained about 104 degrees, pulse 106-110 and resp. 20-30; prostration did not let up and urine continued to show much pus. Blood culture and widal were negative.

N. P. N. August 28 was 175 mg. On August 29 glucose solution 10 per cent was given in vein and temperature fell to 95 and for 20 hours remained low. N. P. N. began to fall and by September 4 was 46 mg. and on September 6, 34 mg. and temperature was normal. The boy was very much better, had an excellent appetite and each day seemed better.

Since September 6 he has steadily improved, though temperature has been irregular, ranging from 98 to 103 degrees and at times being normal for 3 or 4 days at a time. The urine has been clear of pus only once but the next day more pus than usual was present in the urine.

The tenderness in costovertebral angles has passed. X-rays of kidney region were negative. Blood pressure has been normal. Eye grounds show no changes.

The case is shown because of the high N. P. N. and its speedy return to almost normal levels as soon as adequate drainage occurred. At no time had the boy had symptoms of uremia.

Urine culture has revealed an unidentified organism, gram positive short bacillus.

B. CHRONIC ULCERATIVE COLITIS.

—By DR. E. J. CURTIS.

J. F., a girl 6 years old, was admitted, complaining of frequent attacks of diarrhea accompanied by fever. The onset was at 2 years of age and exacerbations of the condition had recurred at intervals of two or three months since that time. During an attack the stools were frequent, foul, and watery with mucus and occasionally blood. Usually some fever accompanied the attack. In the intervals the stools remained soft but not watery.

On examination she was afebrile and having about six stools daily. Examination of these was negative for parasites, dysentery and typhoid. Aside from a mild anemia, the general examination was negative. Rectal examination caused some pain and a constriction was felt about three inches above the anus. Proctoscopic examination showed a few ragged ulcerations at this point. Leucocytes 16,800. Wassermann negative. X-ray barium examination showed flattening of the colonic haustrations characteristic of chronic ulcerative colitis.

Ileostomy, lavage of the colon, and high caloric feedings were followed by notable improvement. In 4 weeks she gained 7 pounds, leucocytes decreased to 8,600 and hemoglobin rose from 68 to 85 per cent.

DISCUSSION

DR. OSCAR ZINK: This case is very interesting in that it illustrates very beautifully the cardinal feature in X-ray interpretation of colitis in that there is a general dehaustation of the colon—an expression of an extensive exudate. There is an approximation of vertical arms, and a decrease in the length of the arms of the colon. In this case the colon has gotten to the point of becoming distinctly involved from the cecum to the rectum with a marked, increased

irritability to the introduction of enemas. The only pictures which were possible were those that we managed to get during the course of a barium meal through the colon. With the ileostomy, that colon—put to rest—will clear up, even with an ordinary irrigating solution such as 1 per cent mercurochrome, and eventually that colon will become cord-like and the lumen obliterated. Often those colons in cases following ileostomy are completely resected. We know of six of them that were successfully resected following ileostomy and irrigation to the colon. At best, longevity in these cases is not over a period of more than two to four years, even with an ileostomy.

C. ANEURYSM AND MULTIPLE BONE TUMORS.—By DR. DAVID P. BARR.

Patient, Henry F. Age 55. Admitted to Barnes Hospital on October 4, 1924, with complaint of pain in back, in right chest, shoulder and hip. He has had pains in legs since the age of 35, and in back since age of 40. In the past few months has noted a swelling in anterior chest, over sternum from the level of the third to the fifth rib. This has given him little discomfort. He gives no history of syphilis. Repeated Wassermann tests have been negative. Fluoroscopic examination reveals an undoubted aneurysm of ascending aorta and multiple bone tumors. These tumors involve the ribs, the pelvis, femur and vertebrae. The body of one of the lumbar vertebrae has been destroyed and accounts for the pain in the back. A biopsy of a tumor from one of the ribs revealed multiple myeloma (not established at time of meeting).

DISCUSSION

DR. SHERWOOD MOORE: To my mind the bone findings in this case indicate it to be a multiple medullary myeloma and it is quite distinctive in appearance. In it there is a thinning of the cortex through pressure, the appearance being somewhat comparable to that of the skull in convolitional atrophy from increased intracranial pressure. In multiple medullary myeloma there is tumefaction throughout the skeleton rather similar in distribution to that of military tuberculosis with some thinning of the cortex. Contrary to this in this particular case, there is a definite multiple expanding process in the bones. In my opinion this is radiologically a unique finding, i. e., multiple lesions of this nature. I know of no condition which will produce just this radiological appearance. Single bone tumors frequently expand, e. g., so-called giant cell sarcoma, but I have never observed such bone change of multiple distribution.

Inasmuch as we are in the presence of a multiple, widely distributed tumor, I think there is a serious question as to whether we have actually an aneurysm co-existing in this case. On fluoroscopic examination I was certain that it was present, but in view of the general situation with this patient, I am now not so certain that we may be dealing with a mediastinal tumor, which may be primary or secondary, with simulation of an expansile pulsation under the fluoroscope. If the former, the bone lesions may be metastatic; they may also prove to be the so-called bone aneurysm, the mediastinal mass being a metastasis with expanding pulsation. A condition which may be somewhat similar to the finding here presented may be encountered in prostatic carcinoma. However, I have never seen one in which the lesions were large and also expanded bone. It is to be hoped that a biopsy may be secured because of the very unusual nature of this case.

D. A CASE OF SYRINGOMYELIA.—By DR. A. D. CARR.

Male, single, age 47. This case is presented for two reasons. The neurological condition is relatively rare and the question of relief of pain offered the only therapeutic accomplishment possible. The patient entered the hospital, however, with a chief complaint of inability to walk and secondarily pains of a shooting character in the legs.

Eleven years ago this patient was struck on the shoulders by a falling tree, doubling him forward, and the log falling on his back. From the time of this accident the patient has been partially paralyzed in the feet and legs. Two and a half years later the patient had a laminectomy after which he was able to get about on crutches for a time. Since that time there has been a gradual progression of symptoms with development of atrophy of muscles, change in nails, and development of decubitus ulcers. On examination the right pupil is slightly irregular but reacts to light, the left pupil is normal. There is a slight weakness of the right internal rectus. Defects in the right eye may be explained on the basis of any old injury to the eye. The other cranial nerves show no defect. The deep reflexes, biceps, triceps, R.P.'s and K.K.'s are about equal and hyperactive. The A.J.'s have not been obtained. There is bilateral patellar clonus but no ankle clonus. No pathological toe signs. Sense of position of toes is entirely lost. There is atrophy of the leg muscles. There is loss of touch, pain, temperature of both legs. The loss of sensation of touch is not complete and rather variable. There is hypotonia of the ankle joints. There is a rather boggy oedema of both feet and ankles with loss of nails and decubitus ulcers of feet. There has also been loss of sphincter control of the rectum. X-ray plates of the spine show a compression fracture of the 4th lumbar vertebrae, and a post operative vertebral process.

Lab. tests: Wass., urine, kidney function and blood are negative.

On October 1, 1924, the lamina and processes of the 2d, 3d and 4th dorsal vertebrae were removed by Dr. Sachs and the anterolateral column of the cord cut at the level of the 5th spinal nerve.

The process present is probably of a syringomyelic nature on the basis of hemorrhage into the central canal of the cord at the time of the accident. Since cordotomy there has been relief from pain and morphine has been unnecessary when previously it was used relatively freely.

DISCUSSION

DR. S. I. SCHWAB: Aside from the very brilliant surgical results obtained in this case, manifested in the change in the general physical appearance, the question of subjective pain experienced is of great interest. Why should the changes found in syringomyelia in the cord produce so much pain? The probable explanation is that it is due to the irritation of the posterior nerve roots, the results of the trauma and the resulting hemorrhage of the spinal cord. It has been suggested that in cases of syringomyelia there are changes in the thalamus which cause the subjective or central pain. In this instance, however, that explanation cannot be accepted. It must be assumed that the pain has been brought about by the irritation of the posterior roots. This, by the way, is not characteristic of the non-traumatic type of syringomyelia, but would be found in such cases as this. In this connection I would like to emphasize the fact that in this case the therapeutic pro-

cedure was originated by a neurologist, Spiller, and carried out by a neurological surgeon.

E. A CASE WITH SYMPTOMS RESEMBLING THROMBOSIS OF THE POSTERIOR INFERIOR CEREBELLAR ARTERY DUE TO A CIRCUMSCRIBED SEROUS MENINGITIS.—By DR. ERNEST SACHS.

This patient had a blow on his head two years ago, following which he was unconscious for several days and then recovered without any untoward symptoms. Two years later, about three months before his admission here, he struck his head again, was just momentarily unconscious but since then has complained of intense pain over his right parietal region, just above and behind his ear. Examination showed involvement of the right fifth nerve, both motor and sensory portion, paralysis of his left eleventh and twelfth, markedly diminished hearing on his right side, vertigo and marked incoordination of walking, diminished sensation to pain and touch on the left side of his body, arm, leg and abdomen, pathological reflexes on the left side.

The symptoms correspond fairly closely to those of thrombosis of the posterior inferior cerebellar artery. The unusual feature was the fact that the left eleventh and twelfth nerves were involved instead of the right, as one would expect, but as the inferior cerebellar artery of one side controls the blood supply of the opposite side of the medulla to some extent, the lesion might be explained in this way.

Because of the intense discomfort the patient had, and total disability, I very reluctantly explored his right parietal region which was so painful. I found evidence of an old linear fracture which had been noted in the X-ray. Underneath this I found a markedly thickened dura and on opening the dura found a moderate number of adhesions between the dura and the pia arachnoid. The cortex, however, looked normal; it did not have the yellowish appearance that one sees so frequently in traumatic cases.

I felt that the exploration would be of no help. Strange to say, ever since the operation the patient's symptoms have been markedly improved and many of them have disappeared. His fifth nerve anesthesia on the opposite side of the body, and the eleventh and twelfth nerve paralyses, have all disappeared. Hearing is still interfered with on the right side but the dizziness and vertigo have gone.

How to explain the disappearance of symptoms is rather difficult. It may be that as a result of the trauma there was a localized serous meningitis and the operative procedure permitted this collection of fluid to escape and thus the patient's symptoms cleared up. There is no question of the marked change that has come over this patient even though the explanation of the pathological process is not thoroughly satisfactory.

DISCUSSION

DR. W. S. RANSON: The symptoms of this case correspond very closely to those in thrombosis of the posterior inferior cerebellar artery. The characteristic feature is loss of pain and temperature sensibility on one side of the face and on the opposite side of the body without the involvement of the sense of touch. Fifty cases of thrombosis of this artery have been described of which 12 have

come to autopsy. The thing which makes such cases of special interest to those of us who are primarily concerned with the structure and function of the nervous system is the light which they throw on the function of the nuclei of the trigeminal nerve. The cases reported in literature which came to autopsy were found to involve the spinal tract of the 5th nerve, but never involved the main sensory nucleus of that nerve. The fact that tactile sensibility is not impaired in these cases points to the main sensory nucleus as the probable nucleus through which tactile sensibility is mediated. The involvement of the spinal tract of the 5th nerve is the cause of the loss of pain over the face. The loss of sensibility on the opposite side of the body is explained by the fact that the lateral spinothalamic tract lies in close apposition to the spinal tract of the 5th nerve. Some few years ago we had occasion at Northwestern University to test out on cats the theory that pain and temperature sensibility in the face are mediated by the spinal tract and nucleus of the fifth nerve, and tactile sensibility by the main sensory nucleus of that nerve, and found that by cutting the spinal 5th tract on one side we could eliminate pain from the face on that side without interference with tactile sensibility. The cats did not respond to electric irritation on the operated side but would sneeze if either nostril were tickled with a camel's hair brush, showing that tactile sensibility was not impaired.

DR. S. I. SCHWAB: In this particular instance the whole neurological department was eager to have Dr. Sachs explore and finally Dr. Sachs did so. It seemed at first that there might be in this case one of those instances of multiple cranial nerve effects following head trauma. Possibly the explanation of the relief afforded by operation in this case is because some effect was produced by the operation upon the physical condition of the cerebrospinal circulation. The condition found was that of an arachnoiditis which is an accumulation of fluid in the arachnoid spaces of an inflammatory kind. It is quite possible that the operation itself tended to relieve the mechanical effect of this accumulation of fluid. The remarkable result obtained by surgical interference in this case is noteworthy and the change in his appearance and the disappearance of his symptoms are certainly remarkable.

2. THE USE OF GERMANIUM IN THE ANEMIAS.—By DR. L. D. CADY.

In 1922 a preliminary report of four cases was given at a meeting of this Society which seemed to indicate that germanium had some therapeutic efficacy in anemias. Subsequently, in seven cases of pernicious anemia, five cases of secondary anemia due to osteomyelitis, spine, splenic anemia, myelogenous leukemia and simple anemia and in twelve rabbits suffering from secondary anemia due to experimental hemorrhage—no evidence of any constant stimulative hematopoietic action was noted.

The general trend of the recent literature on the subject confirms these findings. Minot & Sampson (1923) and Bodansky (1923) present experimental evidence proving that germanium does not exert any remarkable or useful hematopoietic action. M. E. Alexander (1923) likewise finds it valueless in pernicious anemia. The few favorable clinical reports are not conclusive, nor well controlled from an experimental point of view.

DISCUSSION

DR. D. P. BARR: In his study on rabbits, Dr.

Cady used the same sort of test which has been utilized by many others in the trial of hematopoietic drugs. Animals were bled once and the effect of the drug on the blood regeneration was noted. You may remember that Whipple some years ago demonstrated with this sort of test that the therapeutic administration of iron was entirely without effect. Very recent work of Whipple has shown that if animals are bled not once, but many times, the administration of iron accomplishes a most striking benefit in blood regeneration. This indicates that the body has a store of available iron with which to regenerate blood after hemorrhage. One hemorrhage does not deplete this store, but if repeated hemorrhages take place it is necessary to introduce iron in considerable amounts. It seems possible that even if germanium were an effective drug, its effect would not be apparent after a single hemorrhage in the rabbit.

3. LACTIC ACID IN ACIDOSIS OF ETHER ANESTHESIA.—By ETHEL RONZONI, IRENE KOECHIG and EMILY P. EATON.

Previous work on the acidosis of ether anesthesia has dealt mainly with the extent of acidosis. The importance of lactic acid in the acidosis of muscular exercise and the influence of oxidative processes on its accumulation suggests it as a possible cause of the acidosis here observed and the following report is an attempt to correlate the change in acid-base equilibrium with changes in lactic acid. The following table shows some of the results obtained:

Exp.	Decrease in pH	Fall in CO ₂ determined	Capacity calculated from lactic acid	Per cent difference
1	.49	18.7	12.6	—33.2
2	.29	15.3	8.4	—44.1
3	.25	12.2	12.3	+ 1.0
4	.25	15.4	10.5	—31.8
5	.24	9.0	9.20	+ 2.0
6	.27	13.0	16.0	+23.1
7	.37	12.0	7.6	—36.7
8	.18	10.5	10.5	+ 0

The correspondence between the two sets of figures is not exact but this would scarcely be expected even if lactic acid were the only factor involved. The effect of depth of anesthesia between the limits that abolish reflexes and cause respiratory failure exerts little influence on the production of lactic acid. Very light anesthesia so light that reflexes exist gives an increase in lactic acid due undoubtedly to movements of the animal.

It is interesting to speculate on the cause of the increased lactic. Warburg's findings that narcotics follow the Meyer-Overton law as depressants of oxidation as they do in their activity as anesthetics, suggests that we here have an interference with the oxidative removal of lactic acid. The amount of oxygen carried by arterial blood is not interfered with though the oxygen tension is somewhat reduced by the presence of ether. Since diffusion through the lungs is not interfered with, diffusion into the tissues probably is normal. However, if the rate of diffusion of oxygen into the tissues depends on the oxygen tension, the reduced oxygen tension might be a factor in the production of lactic acid. The fact that Stehl and Bourne find an increased phosphate excretion after anesthesia, suggests that lactic acidogen has been broken down but that there has been a failure to rebuild the lactic acid into its precursor, or that there is an increased breaking down of

lactacidogen not due to muscular exercise. There is no evidence as yet as to which of these may be the true explanation.

DISCUSSION

DR. PHILIP A. SHAFFER: Dr. Ronzoni and her associates, Miss Koechig and Miss Eaton, are to be congratulated on having performed a difficult investigation, one requiring great accuracy in blood analyses under trying experimental conditions. Their experiments demonstrate very clearly the fact that during ether anesthesia about 1/5 to 1/3 or more of the total bicarbonate may be neutralized by some other acid, with a corresponding decrease in the alkaline reserve. They show also that the great part of that acid is lactic acid. Furthermore, not only is there a decrease in alkali reserve, but an actual acidosis, in that the blood becomes less alkaline. From this work it is easy to understand that anesthesia can produce a serious acidosis, that is, a lactic acid acidosis, which may be quite injurious if the subject has already a low alkali reserve.

The question of the origin of the lactic acid is interesting. Dr. Ronzoni has gone over the possibilities very well. Whether the lactic acid accumulates because it is produced in larger quantities as the result of ether or because it fails to burn, I think it is almost impossible to say. The simplest and clearest explanation, and one that would be favored I think by Meyerhoff and many other students in this field, would be that there is an interference with lactic acid oxidation. Many believe that carbohydrate is burned through the stage of lactic acid (though I, for one, believe this view to be incorrect). It has been claimed that anesthetization of animals decreases the amount of insulin that may be extracted from the pancreas. It may be that the administration of ether interferes with the formation or secretion of insulin and in that way interferes with lactic acid oxidation. It is certainly a fascinating question, not only in connection with anesthesia, but in connection with the very complex problems of carbohydrate metabolism. I hope Dr. Barr, who also has interested himself in lactic acid, will explain some of these problems.

DR. D. P. BARR: I am quite satisfied that Dr. Ronzoni has covered the possibilities in the case. I do not see how with the present evidence, one may go further. Anything that diminishes oxidation in the tissues tends to increase the amount of lactic acid which accumulates in those tissues. In the muscles one must think of lactic acid being constantly formed and constantly disappearing. The rate at which these processes take place seems to depend on the extent of oxidation. If the supply of oxygen is cut off, lactic acid will accumulate. It seems to me a little easier to explain the accumulation of lactic acid in anaesthesia by assuming that the local oxidation of tissues is diminished by the anaesthetic rather than by an increased production of lactic acid. The evidence however does not preclude either possibility.

4. PROTECTIVE ACTION OF NORMAL SERUM AGAINST PLACENTAL EXTRACT.—By DR. WM. T. DIECKMANN.

The toxic action of intravenous injections of watery extracts of normal organs and the power of normal serum to neutralize this action was first described by Dold in 1910. Our attention was directed to these phenomena by the work of Obata, entitled "On the Nature of Eclampsia." Before conducting any further research, we deemed it advisable to repeat his work in detail.

The method followed by Obata was to extract fresh placenta in normal salt solution and inject the solution intravenously into mice. Death followed if the dose was sufficiently large; but normal serum, either male or female, neutralized the extract.

In eclampsia this neutralizing power of the serum was markedly decreased, but returned to normal four or five days after delivery.

Obata's conclusion is that the true nature of eclampsia is nothing other than an intoxication by the placental poison, which is made possible by the weakening in its normal capacity of neutralization on the part of the maternal blood.

Our results have been similar to those of Obata without exception and so far seem to justify the following conclusions: 1. Intravenous injections of placental extract are toxic for mice. 2. Normal serum has a definite neutralizing power for this toxin. 3. In pre-eclampsia this neutralizing power is definitely decreased. 4. In eclampsia this neutralizing power is markedly decreased, or even absent.

DISCUSSION

DR. LEO LOEB: The work of Obata is of great interest and the confirmation of his results which Dr. Schwarz and Dr. Dieckmann obtained is therefore valuable.

There is one suggestion which I would like to make and which might lead to a substitution of in vitro experiments for the intravenous injection of mice which has been practiced so far. It is based on the assumption that the detoxicating effect which normal blood serum exerts on placental extract is identical with the action of blood serum on tissue coagulins which I had observed previously. I found that if a mixture of blood serum and tissue extract is kept at room temperature for a sufficient length of time, the tissue extract loses its coagulating effect. Presumably the toxic effect of the tissue extract which is observed after intravenous injection depends upon the presence of the tissue coagulins. Obata used in his experiments placental extract probably because placental substances are held responsible for the origin of toxic conditions in the mother during pregnancy. However, it is possible that the effect of placenta in these experiments is not different from that of other tissue extracts. If this suggestion as to the mode of action of serum in detoxicating extracts is correct then it should be possible to determine in vitro whether the serum of eclamptic patients differs from normal serum.

DR. O. H. SCHWARZ: The work of Obata, which Dr. Dieckmann has confirmed as far as he has gone, seems to show that there is a neutralizing substance present in normal adult blood as well as in the pregnant woman and during the puerperium against placental extract. The experiments indicate that there is no increase in quantity of this substance at these different times. The fact that the serum of patients with a severe toxemia late in pregnancy does not render the placental extract innocuous would seem to indicate that the neutralizing substance is in some way rendered inactive during this time. In view of the fact that it is found in equal amounts in the serum of these patients two or three days post-partum, it seems to me that it is logical to assume that some substance is present in the blood of these severe toxemic cases which affects the action of this neutralizing substance.

It is well known clinically that when a patient is given good prenatal care, particularly advice concerning diet and elimination, she rarely, if ever, develops a severe late toxemia. Eclampsia develops in

almost every instance in the neglected patient. These patients invariably are on a general diet, rich in protein, and are usually constipated. It seems, therefore, possible that the absorption from the intestine of some substance or group of substances may have some effect on this neutralizing substance. Perhaps, as a result of pregnancy, changes may occur in the bowels which would make increased absorption of toxic products possible. At least this offers a fruitful field for investigation and we are at the present time trying to make such determinations.

DR. LEO LOEB: I should like to ask a question about the specificity of the toxin.

DR. W. J. DIECKMANN: So far as I know, there is no specificity in regard to placental extract, or the neutralizing substance.

5. AN EXPERIMENTAL AND CLINICAL STUDY OF THE ROENTGENOLOGICAL VISUALIZATION OF THE GALL BLADDER BY THE USE OF VARIOUS COMPOUNDS. — By DRs. EVARTS A. GRAHAM, WARREN H. COLE, and GLOVER H. COPHER.

The sodium salt of tetrabromphenolphthalein is a blue crystalline compound which is so soluble in water that a 40 to 50 per cent solution can be obtained. It has a comparatively low toxicity. The color of the bile and of the blood serum is unchanged after intravenous injection of the dye. Tetrabromphenolphthalein is a cholegogue but is not a biliary disinfectant. Fairly rapid intravenous injection of the sodium salt in the dog causes a sharp transient fall in blood pressure of about 15 mm. of mercury. In the majority of clinical cases there have been no changes in blood pressure. We have not found a satisfactory way of giving the drug other than by the intravenous route.

Many compounds have been studied in an attempt to find suitable substances that will produce a gall bladder shadow. Among the compounds studied are tetrachlorophenolphthalein, tetraiodophenolphthalein, octobromphenolphthalein, tetrabromtetrachlorophenolphthalein, sodium tetrabromphthalate, tribromphenol, dibromphenolsulphonophthalein, di-iodophenolsulphonophthalein, tetraiodophenolsulphonophthalein, tetrabromfluorescein, tetraiododichlorfluorescein, tetraiodofluorescein, tetrabromdichlorfluorescein, brilliant vital red, hexamethylenetetra-amine, iodine compound, trypan blue, methylene blue, gentian violet, mercurochrome, azorubin and phenolphthalein.

Of the above group of drugs, the sodium salt of tetrabromphenolphthalein is the most satisfactory. Five grams, which is the dose for a person of average weight is dissolved in 35 cc. or 40 cc. freshly distilled water, filtered, and sterilized in a boiling water bath for 15 or 20 minutes. It is then given intravenously in two doses, one half hour apart between 7:30 a. m. and 9:00 a. m. Care should be taken not to allow extravasation outside the vein on account of the danger of tissue necrosis. Occasionally reactions, consisting of headache, nausea and pain in the back, result after the injection. These are not serious and are largely controlled with an injection of adrenalin.

Orders for the patient consist of the following: 1. Omit breakfast; 2. Omit lunch (may have glass milk); 3. Omit protein from evening meal; 4. Sod. Bicarb. gr. XXX q 3 h. for 48 hours while awake; 5. May have water; 6. Lie on right side of abdomen as much as possible.

Roentgenograms are taken 4, 8, 24 and 32 hours after the injection. Diagnosis is made from the characteristics of the shadow. The most important of these are:

1. Density of shadow; 2. Contour of shadow; 3. Filling defect; 4. Filling time; 5. Emptying time; 6. Change in size.

DISCUSSION

DR. E. A. GRAHAM: Some of the most interesting things in this work are in the nature of by-products, but are more interesting because, perhaps, more fundamental than those things we started with. Dr. Cole and Dr. Copher have increased our knowledge very materially in regard to the function of the gall-bladder and other aspects of this dark and vague subject; about what the gall-bladder does, its normal physiology, etc. There will not be time to discuss these matters tonight. There is one thing which I would like to speak of briefly, however; the most distressing thing about the work so far as its diagnostic use is concerned, is the toxic effect that occasionally results. We are not quite sure about the explanation of these effects but they do not occur very often, only in exceptional cases. We have never seen any alarming reactions. In the Mayo Clinic Carman has likewise stated that he has not seen any alarming reactions, but occasionally they are unpleasant. I think that many of the reactions that others have got were due to carelessness in the preparation of their material, in not using freshly distilled water, in the careless filtering of the solution afterwards, and other things that might account for the unpleasant symptoms. It would be highly desirable if we could get away from the unpleasant effects; we are trying now to do that. The intravenous injection of about 0.5 c.c. of adrenalin (1 to 1000) is the best means we have yet found for preventing the toxic reactions. If we could only use the sulphonated salt we could doubtless get away from any reaction, but unfortunately we cannot do that because as soon as we introduce the sulphone radicle, the substance passes out through the kidneys and we cannot get any shadow. The material used at the present time is the disodium salt of tetrabromphenolphthalein. This is the most successful substance of something like 35 possibilities that we have worked on. We may still find that there is something more desirable than this particular salt. The principle is very simple, to get something into the gall-bladder that will not be toxic and that will be opaque to the X-rays. Most iodine substances are too toxic, so that leaves us with the necessity of bromine substitution products.

DR. SHERWOOD MOORE: The idea embodied in this method of examination of the gall-bladder is original and a brilliant conception, the result of which will be of great value, not only in regard to the study of the gall-bladder but in diagnosis of gastric, kidney and other obscure conditions. It holds promise of giving information in regard to the biliary duct which will be unique, and hitherto beyond diagnostic reach. Further, the principle in this method is one in the direction of which future progress in X-ray studies must take place. This method reaches into that field beyond the mere demonstration of biliary calculi, thickening, displacements, etc., of the gall-bladder. Various writers give various percentages of correct conclusions as to the presence of biliary calculi. Carman's figure at the Mayo Clinic is about 40 per cent; if I remember correctly Mills's in our own department was 60 per cent. Some claim as high as 75 per cent of stones

found where they have been reported after X-ray examination. However, the fact that calculi are present is only of importance because it indicates that a diseased gall-bladder exists or has existed. The pathological gall-bladder is the important point. It takes time for the formation of a calculus. The greatest diagnostic need is to uncover the disease and Dr. Graham's method so far as it has been developed promises to bring this affection into early and certain diagnosis.

Besides the demonstration of a biliary calculus, many writers have thought that a gall-bladder the outline of which was demonstrable on an X-ray plate, was for that reason clearly indicated as pathological. This point has in radiological circles been debated pro and con with more or less acrimony. The workers in the Department of Radiology in the Mayo Clinic claim that they could demonstrate a normal gall-bladder and therefore the views of those believing this to be a sign of disease can not be accepted. In the realm of secondary signs of gall-bladder disease, which is also a field in which there is much disagreement of opinion, through the tetrabromide method of examination the disputed points will possibly be brought into harmony. These secondary signs are impressions on the gall-bladder from extracystic conditions, impressions of a gall-bladder on neighboring viscera, dislocations or displacements of either. These secondary signs have been given great weight in diagnosis, particularly by A. W. George, whose work in this direction has been brilliant. From personal communication with Dr. Carman I understand that the Mayo Clinic has done a very large amount of work by this method and it has been enthusiastically received. If I remember correctly, Dr. Carman stated that 87 per cent of the X-ray conclusions have been proven correct at operation. Incidentally in the majority, if not in all of the operative cases a section of the liver showed no pathological change that might be attributed to the employment of this dye. In the series a case of soft or negative gall stones was found and confirmed in a very young girl with history and examination entirely negative for cholecystic disease. Another interesting example was a filling defect in the outline of the gall-bladder, the result of papilloma, also confirmed at operation.

Dr. Cole has shown and spoken of the variations in density of the shadow of the gall-bladder as a measure of its variation in function. I should like to say a word of caution as to the appraisal of these variations in intensity; they must be weighed very carefully. In radiological work the most difficult thing to do correctly is to give the correct value to these slight variations in intensity and in this particular field variations may be the result of a deviation in liver function, not in that of the gall-bladder, and of course there is an ever present possibility of technical error, both radiological and in the administration of the dye. At present one must be careful to avoid letting his enthusiasm or speculation lead him too far in estimating the value of the Graham method. I wish I could recall Carman's exact words in speaking of it. At any rate he thought it was of the greatest importance. My own view is that it will be fully as valuable in its particular field, possibly more so, than was the employment of the opaque meal in gastro-intestinal X-ray diagnosis.

The meeting was called to order by Dr. B. F. Carr, acting president, in the absence of Dr. W. S. Dowell. Those present were: Drs. Benj. F. Carr, Clifford H. Wilbur, Geo. S. Dowell, Polo; Tinsley Brown, Herbert R. Booth, Hamilton; Isaac N. Parrish, Cowgill; Morgan L. Clint, Mrs. O. N. Thompson, Breckenridge; Wm. S. Shouse, Jas. E. Gartside, Kingston. Visitors: Drs. P. T. Bohan, W. T. Reynolds, of Kansas City, Dr. A. J. Simpson, of Chillicothe. The visiting doctors were accorded the privileges of the society.

The minutes of the previous meeting held at Braymer, October 24, were read and approved.

The clinical cases presented were examined by Dr. Bohan. An interesting case was that of a man 27 years old who had always been healthy until last August when he was suddenly taken ill with fever, vomiting, aching in head and back, cramping in legs and arms. He diagnosed his own case as "summer flu" and sent for some medicine. In a few days the fever subsided but his legs still pained him. When he attempted to walk he found he did so with much difficulty as he did not have much strength in his legs, especially the right one. He could not walk well as his foot would catch in any object on the ground and he fell a number of times. He has somewhat regained power in his legs but the foot is abducted and there is atrophy of the anterior thigh muscles. Dr. Brown saw him some time ago and advised him to attend this meeting for examination. Dr. Bohan, after his examination and eliminating what might be the cause, said it undoubtedly was a case of infantile paralysis.

Dr. Booth presented a case for examination of a female, aged 25 years, married second time. One living child aged 3 years and one miscarriage. Has had tonsillitis at various times. Has been sick since last August, in bed most of the time. She is easily disturbed and cries frequently. Has fainting spells and becomes numb which frightens her and she thinks she is going to die. She has a heart murmur with first sound of the heart at apex. Dr. Bohan, after examination, thought it was a case of neurasthenia.

The cases were discussed by Drs. Reynolds, Simpson and others.

Dr. Reynolds took up the subject of gall-bladder operations and discussed the different methods of dealing with them by the surgeon, such as extirpation or draining. He said never to operate in cases of acute cholecystitis. This subject was discussed by Dr. Simpson and others.

A vote of thanks was tendered Dr. Bohan and Dr. Reynolds for their presence and addresses.

Drs. C. B. Woolsey and H. A. Cox who had been suspended for nonpayment of due made application for membership and were elected and their names entered on the roll of our society.

The following were elected officers for 1925: Dr. Geo. S. Dowell, president; Dr. Tinsley Brown, secretary-treasurer; Dr. J. E. Gartside, censor for three years. Dr. Tinsley Brown elected delegate to the State Medical Association for 1925.

All practicing physicians now residing in Caldwell County are members save two.

The meeting adjourned to meet in Kingston sometime in December if weather and roads permit.

TINSLEY BROWN, M.D., Secretary.

CALDWELL COUNTY MEDICAL SOCIETY

The Caldwell County Medical Society met in the Theater Building at Polo, November 20, 1924, at two

CAPE GIRARDEAU COUNTY MEDICAL SOCIETY

The Cape Girardeau County Medical Society met in regular monthly session in Cape Girardeau,

November 10, with the following members present: Drs. Howard, Wilson Chostner, Yount and Zimmermann of Cape Girardeau; Drs. D. I. L. Seabaugh and Seibert of Jackson and Dr. Crites of Sedgewickville.

The Society was called to order by Dr. Zimmermann, the president, and the minutes of the October meeting were approved as printed in the Bulletin.

There being no official business, the scientific program was taken up. Dr. Chostner gave us a very interesting paper on "The Management of Sick Infant." The paper was fully discussed by those present. Neither of the other members who were on the program were present (Drs. Walker and Murphy.)

Several interesting case reports were given.

After the Society adjourned, upon the invitation of Dr. Yount, we went to an ice cream parlor for refreshments.

D. G. SEIBERT, M.D., Secretary.

[In the December number of the Bulletin of the Cape Girardeau County Medical Society the editor makes some encouraging comments which we are sure will be a good influence on stimulating larger attendance at the meetings during 1925.] He says: "This issue of THE BULLETIN completes the first volume of the publication and with it ends the activities of the county society for the year."

In looking backward we can recall many good things and much interest and instruction we would have missed had we not had the privilege of attending these meetings.

We have had good officers who have been faithful and attentive and they deserve our praise and expressions of appreciation for the time and energy spent for the welfare of all concerned.

While the attendance at the meetings is nothing like it should be considering the large number of physicians on our roster, the interest by those who attend keeps up a glow of enthusiasm which is always contagious.

Here's hoping that a good crowd will be at the December meeting which is the time for election of officers and the winding up of the year's business. Don't forget the date, December 8.

We are also asked to make it known that a light lunch will be served and a general good time is expected."

LACLEDE COUNTY MEDICAL SOCIETY

The Laclede County Medical Society met at the Commercial Hotel in Lebanon, December 1. Dr. J. W. Lindsay, President, presiding. The following were present: Drs. J. A. McComb, H. A. Hamilton, J. M. Billings, of Lebanon; Dr. L. D. Hartley, of Nebo; Dr. J. G. Scott, of Fate; Dr. W. O. Pool, Stoutland. Visitors: Dr. Oliver, of Richland; Dr. Claiborne, of Decaturville; Dr. Paul Cole and Dr. H. A. Lowe, of Springfield.

The first thing on the program was a sumptuous six o'clock turkey dinner served at the Commercial Hotel for which the doctors showed their appreciation, judging by the way the turkey disappeared. After spending an hour at this most pleasant entertainment the meeting was called to order by the president.

This being the annual meeting the election of officers for 1925 was held which resulted in the election of the following: President, Dr. J. C. Scott; vice-president, Dr. T. B. Herbert; secretary-treasurer, Dr. J. M. Billings. The president made the

following appointments: Program Committee, Dr. J. A. McCombs, T. B. Herbert, and H. A. Hamilton.

The question of consolidating Laclede, Pulaski and Camden County Societies was discussed at some length by all present. It appears that these societies are small in number and it seemed to be the consensus of opinion that if they united it would create a greater interest and better attendance.

Dr. Oliver who was present from Pulaski County and Dr. Claiborne, of Camden County were asked to bring the matter before their own societies at an early date.

Dr. Paul F. Cole, Springfield, gave an interesting and instructive talk on X-ray and Radium showing some marvelous results in diagnosis and treatment, especially of cancer and disease of lungs, gall bladder and other diseased conditions. Presenting slides before and after treatment. The discussion was led by Dr. Lowe, of Springfield, giving history of some of the cases shown by Dr. Cole. His opinion is that this is the beginning of great things along these lines. This was followed by general discussion by members present.

A vote of thanks was extended to Drs. Cole and Lowe for their contribution to the meeting.

No other business appearing the meeting adjourned.

J. M. BILLINGS, M.D., Secretary.

MARION COUNTY MEDICAL SOCIETY

The Marion County Medical Society held a meeting Friday evening, December 5, 1924, at Hannibal. The following members were present: Drs. Wm. H. Hays, Joel W. Hardesty, Henry L. Banks and Edward T. Hornback, Mary S. Ross, all of Hannibal; S. W. Holt, visitor.

This being the time for electing officers for the coming year, the following were elected: President, Henry L. Banks; vice-president, Wm. H. Hays; secretary-treasurer, Mary S. Ross; delegate, Thomas Chowning; censor, Elmer E. Waldo.

The meeting was an exceedingly good one, several interesting cases being reported. Dr. Hardesty reported a very interesting gall-bladder case upon which he operated last week.

Dr. Banks reported several cases of uremia of pregnancy. Suppurative meningitis cases following middle ear abscess without mastoid symptoms were discussed as were some of the recent hiccough cases in this vicinity.

MARY S. ROSS, M.D., Secretary.

RANDOLPH COUNTY MEDICAL SOCIETY

The Randolph County Medical Society held its regular monthly meeting, December 9, with eleven members present.

It being the last meeting of the year there was no scientific program, the time being spent in closing the year's business and the election of officers for the year 1925.

The following officers were elected: President, Dr. G. M. Nichols, of Higbee; vice-president, Dr. J. Maddox; secretary-treasurer, Dr. C. H. Dixon; delegate to state convention, which meets in Kansas City in May, Dr. S. T. Ragan; alternate, Dr. T. S. Fleming; members board of censors: three years, Dr. Paul C. Davis, for two years, Dr. S. P. Towles.

Those present were: Drs. R. A. Mitchell, S. T. Ragan, L. E. Huber, P. C. Davis, S. P. Towles, J. Maddox, G. O. Cuppaidge, F. L. McCormick, L. A. Bazan, Dr. Hunker of the Wabash Hospital and Dr. C. H. Dixon.

The next meeting will be held the second Tuesday in January, 1925, at which time Dr. L. A. Bazan will read a paper.

VERNON COUNTY HEALTH WEEK

"KEEPING WELL PEOPLE WELL"

Under the auspices of the Vernon County Board of Health, Vernon County School System, Vernon County Farm Bureau and Vernon County Medical and Dental societies, a Vernon County Health Week was held at Nevada, November 3-7, 1924.

On Monday morning, November 3, a dental survey was made of the Benton School and a healthy survey of Blair School. In the afternoon Miss Mary E. Stebbins, R.N., an instructor in child hygiene at the state university, with the assistance of Farm Agent, J. A. Muster, gave a lecture on "The Care of the Sick." In the evening the film, "Working for Dear Life," was shown at the Star Theater sponsored by the Metropolitan Life Insurance Company.

On Tuesday, November 4, the dental and health survey of schools was continued at the Bryan and Benton schools and the program of the previous day repeated with the addition of a lecture on "Preventive Dentistry" by Dr. Dean H. Phelps, D.D.S., and a play, "David and the Good Health Elves," given at all schools.

On Wednesday, November 5, the Franklin and Bryan schools were surveyed for dental and health conditions, the lecture on "The Care of the Sick" repeated, a stereopticon lecture, "The Conservation of Vision," by Dr. T. McLemore and a lecture on "Oral Hygiene" by Dr. W. M. Davis, D.D.S., were given, both being sponsored by Professor Engleman and the division of hygiene of the Parent-Teachers Association.

On Thursday, November 6, "Immunization for the Prevention of Diphtheria" was described by Dr. Frank C. Neff, of Kansas City, assisted by Professor H. K. Robbins, physical director for the Nevada schools, and the Jefferson Parent-Teachers Association. On this day defective children were examined and corrections suggested for their care by Drs. C. C. Dennie, Frank C. Neff and Rex L. Diveley, of Kansas City, assisted by Professor R. B. Holmes, County Superintendent of Schools, and Mrs. W. W. Nunn, County Truant Officer. The Woman's Auxiliary of the Vernon County Medical Society was organized with the assistance of Dr. W. A. Clark, president of the Missouri State Medical Association. A cooperative meeting of the medical societies of Bates, Cass, Cedar, Henry, Johnson, Lafayette and Vernon counties was held. An operative trachoma clinic was conducted by the physicians from the Trachoma Hospital and a number of addresses were delivered by the physicians in attendance at the meeting. A banquet was held at State Hospital No. 3 at six o'clock in the evening given by Col. Fulkerson, president of the Eleemosynary Board, Dr. George A. Johns, Health Supervisor and the medical staff.

On Friday, November 7, talks were given by Drs. Curtis and Russell, and the dental and health survey of schools continued. The county school teachers held a meeting and luncheon at Centenary Church and the lecture on "The Care of the Sick" by Miss Stebbins and the film, "Working for Dear Life," at the Star Theater was repeated.

J. T. HORNBACK,
Part Time County Health Officer.

BOOK REVIEWS

BASAL METABOLISM IN HEALTH AND DISEASE. By Eugene F. Du Bois, M.D., Medical Director, Russell Sage Institute of Pathology. Illustrated with 79 engravings. Lea & Febiger. Philadelphia and New York. 1924. Price, \$4.75.

For the first time, so far as we know, we have a comprehensive textbook on basal metabolism that is designed for the practicing physician. While certain fundamental laws of physics and gasses and general principles are discussed, the general aim of the author is to keep within the bounds of practical application of this subject in the practice of medicine.

After a general survey of the subject in Part I, the author devotes Part II to the consideration of basal metabolism in disease. These chapters deal with undernutrition, overnutrition and obesity, diabetes, diseases of the ductless glands (particularly the thyroid), diseases of the blood, heart and kidneys, nervous system, fever, etc.

DuBois states that there is no question regarding the value and reliability of basal metabolism as a guide to the activity of the thyroid gland; it has been proven in thousands of cases. However, the technic is difficult and at times mistakes may be made, even by skilled operators. Again certain individuals are subject to variation up to 20 per cent. (10 per cent variation is considered normal). In every disease certain individuals may vary from the typical, but take it all in all, when properly checked, there is probably no more consistent test used in laboratory medicine.

The excellence and value of this book cannot be overestimated.—R. L. T.

LECTURES ON PATHOLOGY. Delivered in the United States, 1924. By Ludwig Aschoff, M.D., Professor of Pathologic Anatomy, University of Freiburg, Germany. With 35 Illustrations. New York: Paul B. Hoeber, Inc. 1924. 365p. Price \$5.00.

In his first lecture (the reticulo-endothelial system) the author takes up a fundamental morphological problem; and while such a problem is of interest particularly to workers in pathological anatomy, nevertheless, a hint is given of the clinical significance of the identification of certain types of leucemia and of certain tumor growths on the basis of this work. It is interesting to note in this connection that credit is given to Mallory, an American pathologist, for his original discovery of the histocytic origin of the lymphatic tissue swelling in typhoid fever.

Of great interest is the lecture on pulmonary tuberculosis. A wonderfully clear concept of the morphology of the entire progress of the disease is given and the process of primary and subsequent infection clearly presented.

Passing over some of the more academic chapters, e. g., inflammation, fatty changes, arteriosclerosis, ovulation and menstruation, pigment formation, thrombosis, etc., we still have fundamental studies on such subjects as origin of bile and formation of gallstones, diseases of the kidney, ulcer of the stomach, and so on, that cannot fail to be of interest to the student practitioner of surgery or medicine. The lecture on the goitre problem is one that should be read by every practicing physician. Rarely is a book that is so crammed with knowledge such easy reading as these lectures of Professor Aschoff. The usual fine bookmaking of Hoeber is also to be noted.

R. L. T.

THE EXAMINATION OF PATIENTS. By Nellie B. Foster, M.D., Association Physician to the New York Hospital; Associate Professor of Medicine at Cornell University, College of Medicine. Octavo of 253 pages, illustrated. Philadelphia and London. W. B. Saunders Company. 1923. Cloth, \$3.50 net.

From an academic viewpoint Doctor Foster's book is of value in that it gives in a clear, concise, systematic and practical way a rather complete method of physical examination. Clinically it is of value in presenting so simply and accurately a method by which the physician can examine his patients and come to conclusions, generally correct. The lesson it impresses is the need for careful physical examinations and the training of physicians to be good, painstaking, thorough clinicians. Notwithstanding the training of the students and the necessity for accurate histories and complete physical examinations, they tend early, even in their senior and intern years, to laxity in the above and short cuts to diagnosis. It takes time and patience to get a good history and make a physical examination and the average physician does not feel inclined to sacrifice both, as he thinks, when an easier way is at hand though more expensive and less valuable to the patient and the doctor in the majority of cases. Laboratory tests and X-ray examinations are useful and very necessary aids and examinations are not complete without them, but they do not take the place of a good, careful history and thorough physical examination; neither are they of as great benefit.

Credit is due Doctor Foster for outlining a simple, systematic method for examining patients and greater credit for so clearly showing the value and necessity for an accurate history and thorough, careful examination. E. P. B.

CHILD HEALTH LIBRARY. A series of ten books by practicing specialists of the highest standing, giving the latest and most authoritative information on every phase of child health. Edited by John C. Gebhart with introduction by Haven Emerson, M.D. New York: R. K. Haas, Inc., 218 West 40th Street.

These are very excellent books for parents and guardians of children, giving in a very brief though excellently condensed fashion, the essentials of hygiene and disease prevention in children. Parents, teachers, guardians and all others who have the care and supervision of children will find the series very helpful.

The books were written by a group of prominent pediatricists and social workers in New York City and are prefaced with an introduction by Dr. Haven Emerson. The purpose of the series is to teach parents how to cooperate with the physician in promoting and preserving the health of the child.

THE CHEMICAL BASIS OF GROWTH AND SENESCENCE. By T. Brailsford Robertson, Ph.D., D.Sc. Professor of Physiology and Biochemistry, University of Adelaide, South Australia. Philadelphia and London: J. B. Lippincott Company. (c. 1923) 389p. (Monographs on Experimental Biology.)

Professor Robertson, now Professor of Physiology and Biochemistry at the University of Adelaide, was formerly Professor of Biochemistry at the University of California, and therefore combines the desirable features of excellent presentation of the subject with first hand information in the field of biological research. The book, as one might

anticipate, is mechanistic in its tendency and is really a desirable monograph because it contains a digest of 538 references. Apart from failure to mention the careful statistical work of Scammon and his co-workers at the University of Minnesota, the bibliography appears quite complete, carefully noted and indexed. The range of the topic covered is so great that only mention may be made of the general arrangement.

The first chapter introduced the biochemist's viewpoint with the "Master-reaction" which is defined as "The specifically slowest reaction in the series governing the whole." Chapters II and III are developed to the growth of man, animals and plants and while they are perhaps a little technical for the average reader, the information is also presented in graphic form which is easily understood. The mathematics proper is confined to the appendix.

Chapter IV deals with the reproduction of unicellular organisms and includes a consideration of the "lag-period." Chapters V and VI are devoted to the inorganic salts and amino-acids and a very excellent account of vitamins which Robertson prefers to call "the accessory food factors" and which are not considered as catalysts but as substances which enter directly into the manufacture of materials elaborated by the cells themselves. The following chapter considers factors which bring about a retardation of growth, the influence of starvation together with certain philosophical conceptions of senescence. In the chapter on Differentiation and Development, a return is made to the Weismannian teachings "that the development of the individual depends on a series of gradual qualitative changes in the nuclear substance of the egg-cell." Robertson favors a change in the word "qualitative" by substituting the word "quantitative" and feels that this makes the theory fit the facts for developmental regenerative conditions. He accounts for the possibility of regeneration on the basis that the germ-plasm may have been lost to the nucleus but not to the cytoplasm. This point is of particular interest in the problem of re-differentiation of tissue cells.

Chapter IX deals with the nutrient level and analyzes the experimental evidence in starvation experiments and this is followed by considering the influence on growth of lecithin, cholesterol, pituitary, corpus luteum and interstitial substance. The final chapter on growth and evolution is again largely philosophical.

The book should appeal to all who are interested in the wider problems of biochemistry and of physiology and presents a very acceptable cross section of what has been accomplished in this field. It brings together a varied and large bibliography in a condensed and readable form. A. G. P.

ABT'S PEDIATRICS. Volume IV. By 150 specialists. Edited by Isaac A. Abt, M.D., Professor of Diseases of Children, Northwestern University Medical School, Chicago. Set complete in eight octavo volumes totalling 8000 pages with 1500 illustrations. Philadelphia and London. W. B. Saunders Company. 1924. Price \$10.00 per volume. Sold by subscription.

This volume, the fourth of the large series on pediatrics, contains chapters by 26 contributors. The first 200 pages are on the medical and surgical considerations of pleural, lung, thoracic and mediastinal diseases.

Physiology of the circulation in children is a sub-

ject of unusual interest written by Dr. Carl John Wiggers, Department of Physiology, Western Reserve University, Cleveland.

Electrocardiography in children is presented in 60 pages by Dr. Max Seham. Acquired diseases of the heart and the physiology of the blood are described by Dr. Murray H. Bass. Then come the anemias and hemorrhagic diseases by Drs. William Palmer Lucas and E. C. Fleischner.

A short chapter on blood transfusion in infants and children is descriptive of methods suited to the ages which have usually been considered difficult of application.

The ductless glands and their diseases, the lymph glands, renal function in children, diseases of the urinary and genital tracts (nearly 400 pages) are exhaustively treated. When one considers the completeness of consideration given these subjects it is easy to see what a monumental size Abt's Pediatrics will attain.

F. C. N.

ABT'S PEDIATRICS. Vol V. By Various Authors. Edited by Isaac A. Abt, M.D., Professor of Diseases of Children, Northwestern University Medical School, Chicago. Set complete in eight octavo volumes totalling 8000 pages, and separate index volume free. Philadelphia and London. 1924. Price \$10.00 per volume. Sold by subscription.

The 5th volume of Abt's Pediatrics follows closely the appearance of the 4th volume. There are 24 contributors to the volume. The first half of the book takes up the consideration of bones, tendons, joints, their diseases and malformations, the writers being chiefly orthopedic surgeons. Then follow chapters on general tuberculosis, hereditary syphilis, erythema infectiosum and nodosum, and bubonic plague.

Five chapters on actinomycosis, glandular fever, dengue, the trypanosomiasis and Malta fever are contributed by Drs. Paul G. Wooley and Wade W. Oliver.

A chapter of unusual rarity is upon the subject of yellow fever in children, written by Assistant Surgeon-General Carter of the U. S. Public Health Service. Malaria with its application in childhood is the joint work of Drs. Krauss and Mitchell, of Memphis.

Not the least among the excellent features of work contributed mostly by specialists is the presentation of typical and often rare illustrations and photographs which such writers have secured.

F. C. N.

FULL DENTURE PROSTHESIS. By Dayton D. Campbell, D.D.S. Professor of full denture prosthesis in the Kansas City-Western Dental College, Kansas City, Mo. With 282 illustrations, including 6 in color. St. Louis. C. V. Mosby Company. 1924. Price \$7.50.

This is undoubtedly one of the most complete textbooks written on this subject. The chapter, "Some Psychological Phases" is a very practical addition to a textbook of this kind and to the student should bridge a gap of several years if closely studied. The chapter on "Continuous Gum Dentures" is exceptionally good, which service should be more closely studied and avoided by a greater number of dentists. The illustrations are very good and all as self-explanatory as could be possible.

The volume is a very valuable addition to dental literature.

R. M. W.

DIABETES. And Its Treatment by Insulin and Diet. By Orlando H. Petty, B.S., A.M., M.D., F.A.C.P., Professor of Diseases of Metabolism, University of Pennsylvania. With several illustrations. Philadelphia. F. A. Davis Company, Publishers. 1924. Price \$1.50 net.

This timely volume intended for the patient covers the field very well and instructs the patient in the proper methods of dieting, weighing and proportioning, and maintaining a proper food balance. With this book and a pair of spring scales graduated to grams a diabetic patient can protect himself scientifically and be of great assistance to the doctor and his treatment by insulin.

H. N. J.

ANGINA PECTORIS. By Sir James Mackenzie, M.D., F.R.S., F.R.C.P., Director St. Andrews Institute for Clinical Research. New York. Oxford University Press. 1924. 253p. Illustrated. Cloth. Price, \$9.

The study of angina pectoris has been carried on by a great many physicians since Herberden called attention to it as a definite clinical condition. A great mass of observations has been accumulated, but there has been much divergence of opinion as to their interpretation. This divergence is an indication that there is something lacking in the knowledge of the subject. Seeing that the consideration of this subject has failed to bring an agreement, it may be assumed that the method of inquiry has been defective.

In his monograph on angina pectoris, Mackenzie proceeds first to investigate the mechanism of pain. Peripheral pain is due to stimulation of a sensory nerve, the stimulus passing up the nerve through the posterior root ganglion into the spinal cord and so to the brain, where the sensation is recorded as pain and is referred to the area stimulated. In visceral pain, however, the stimulus goes up the sympathetic system to the cord and thence passes along the same track as does a peripheral stimulus, being equally perceived by the sensorium as pain, but being referred not to the organ involved but to the corresponding peripheral area. Accordingly, a variety of internal stimuli may give rise to identical peripheral pain. From this arises the difficulty of distinguishing between true angina pectoris due to coronary disease and secondary angina (pseudangina) due to other disorders, often neurotic. These secondary anginas are far more common in women than in men. Attacks of anginal pain in women, especially if severe (out of all proportion to the apparent gravity of the cardiac lesion) must always be suspected of not being true angina.

The volume is gotten up in the well known beautiful fashion of the Oxford Medical Publications and Mackenzie's charming and unaffected style makes the book easy reading. An appendix containing some 160 case records adds to the value of the monograph.

A. E. T.

X-RAYS AND X-RAY APPARATUS. An Elementary Course. By John K. Robertson, Associate Professor of Physics, Queen's University, Kingston, Canada. New York. The Macmillan Company. 1924.

This book comprises a course of elementary lectures on the physics of radiology. The aim is to form a basis of instruction in the physical end of X-ray work for physicians and technicians especially who are not well versed in this subject. The chapters include a discussion of the different units necessary in the production of X-rays, the value of X-rays, dosage and deep therapy.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

SCHICK TEST—LEDERLE (New and Nonofficial Remedies, 1924, p. 335).—A diphtheria immunity test, also marketed in packages of one vial containing diphtheria toxin sufficient for 50 tests; in packages of one vial containing diphtheria toxin sufficient for 100 tests. Lederle Antitoxin Laboratories, New York.

ANTIDYSENTERIC SERUM—P. D. AND Co. (New and Nonofficial Remedies, 1924, p. 301).—An antidyenteric serum, also marketed in packages of one syringe containing 20 Cc. Parke Davis and Co., Detroit.

BARBITAL—MERCK.—A brand of barbital N. N. R.—(New and Nonofficial Remedies, 1924, p. 62). Merck and Co., New York.

BARBITAL SODIUM—MERCK.—A brand of barbital sodium—N. N. R. (New and Nonofficial Remedies, 1924, p. 63). Merck and Co., New York.

CARBON TETRACHLORIDE—MERCK HIGHEST PURITY "C. P."—A brand of carbon tetrachloride medicinal—N. N. R. (New and Nonofficial Remedies, 1924, p. 84). Merck and Co., New York.

CARGENTOS OINTMENT, 5 PER CENT.—An ointment composed of cargentos (formerly marketed as cargentos new process, New and Nonofficial Remedies, 1924, p. 343), 1 part; anhydrous woolfat 19 parts. The H. K. Mulford Co., Philadelphia.

CARGENTOS CAPSULES, 3 grains.—Capsules, each containing cargentos (formerly marketed as cargentos new process, New and Nonofficial Remedies, 1924, p. 343), 3 grains. The H. K. Mulford Co., Philadelphia.

DIPHThERIA TOXIN—Antitoxin Mixture New formula (Park Banzhaf's 0.1 L + Dose).—A diphtheria toxin-antitoxin mixture (New and Nonofficial Remedies, 1924, p. 298), each Cc. of which constitutes a single dose, and contains 0.1 lethal dose of toxin properly neutralized with the necessary amount of diphtheria antitoxin; marketed in packages of three 1 Cc. vials representing one immunizing dose; in packages of thirty 1 Cc. vials representing ten treatments; also in packages of one 30 Cc. vial representing three treatments of three doses each. The H. K. Mulford Co., Philadelphia. (*Journal A. M. A.*, Nov. 1, 1924, p. 1431.)

NUTRIVOID FLOUR.—A vegetable product composed chiefly of unassimilable carbohydrates (mamas). It contains fat, 0.92 per cent; protein, 4.31 per cent; nonutilizable carbohydrates, 85.37 per cent. Nutrivoid flour is used as a means of filling out restricted diets, as in the Allen treatment of diabetes. It is a non-nutritive food substance used to give bulk to foods, thus serving to satisfy hunger without furnishing nourishment. Nutrivoid Diabetic Flour Co., New York.

INSULIN-SQUIBB.—A brand of insulin (New and Nonofficial Remedies, 1924, p. 149). It is supplied as insulin-Squibb 10 units (5 Cc. vials containing 10 units in each Cc.), and insulin-Squibb 20 units (5 Cc. vials containing 20 units in each Cc.). E. R. Squibb and Sons, New York. (*Journal A. M. A.*, Nov. 8, 1924, p. 1599.)

LACTO-DEXTRIN.—A mixture composed of lactose, 73 per cent; dextrin, 25 per cent, and desiccated

lemon juice, 2 per cent. The administration of lacto-dextrin is proposed as a means of promoting the growth of the normally present aciduric organisms *B. acidophilus* and *B. bifidus* in the alimentary tract, so as to make them the predominating organisms. It is claimed that this increased growth of acidophile organism prevents the undue development of putrefactive bacteria and their products. It is claimed that this change in the character of the intestinal flora brings about increased intestinal activity and that this in turn prevents or ameliorates certain conditions commonly ascribed to putrefactive products in the colon. Battle Creek Food Co., Battle Creek, Mich.

PITUITARY EXTRACT-LILLY (Obstetrical.)—A slightly acid aqueous solution containing the water soluble principle or principles of the fresh posterior lobe of the pituitary body of cattle. It is tested for oxytocic action on the isolated uterus of the virgin guinea-pig against a standard solution prepared from defatted desiccated posterior lobe powder and adjusted so that its strength is equal to that of a 5 per cent solution of the fresh posterior lobe of the pituitary gland. For a discussion of the actions and uses, see general article, Pituitary Gland, New and Nonofficial Remedies, 1924, p. 225. Pituitary extract-Lilly (obstetrical) is marketed in ampules containing 0.5 Cc. and 1 Cc., respectively. Eli Lilly and Co., Indianapolis.

PITUITARY EXTRACT-LILLY (Surgical.)—A slightly acid aqueous solution containing the water soluble principle or principles of the fresh posterior lobe of the pituitary body of cattle. It is tested for its pressor action on the blood pressure of mammals and for oxytocic action on the isolated uterus of the virgin guinea-pig against a standard solution prepared from defatted, desiccated posterior lobe powder and adjusted so that its strength is equivalent to that of a 10 per cent solution of the fresh posterior portion of the pituitary gland. For a discussion of the actions and uses, see general article, Pituitary Gland, New and Nonofficial Remedies, 1924, p. 225. Pituitary extract-Lilly (surgical) is marketed in ampules containing 1 Cc. Eli Lilly and Co., Indianapolis.

CULTURE BACILLUS ACIDOPHILUS—Medical Laboratories, Inc.—A broth culture of *Bacillus acidophilus* in bottles containing about 120 Cc. It contains from 250 to 500 million of viable organisms (*B. acidophilus*) per Cc. at the time of sale. For a discussion of the actions and uses, see Lactic Acid-Producing Organisms and Preparations (New and Nonofficial Remedies, 1924, p. 169). Medical Laboratories, Inc., New York. (*Journal A. M. A.*, Nov. 15, 1924, p. 1589.)

TETRABROMPHENOLPHTHALEIN SODIUM.—The sodium salt of a dibasic dye, tetrabromphenolphthalein. Tetrabromphenolphthalein sodium is used for the roentgenologic examination of the gall bladder. Following intravenous injection the substance appears in the gall bladder in sufficient concentration to cast a shadow to the roentgen ray. After injection, some of the patients may have unpleasant symptoms such as dizziness, nausea, various body pains, and fall in blood pressure. The use of tetrabromphenolphthalein sodium is still in the experimental stage and workers are cautioned as to the selection of types of cases in which it is indicated and its possible toxicity in large doses. To visualize the gall bladder, 4.5 to 5 Gm. is sufficient for a patient weighing 125 pounds or more, and should be reduced for patients weighing less. (*Journal A. M. A.*, Dec. 27, 1924, p. 2095.)

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies
Issued Monthly under direction of the Publication Committee

VOLUME XXII

FEBRUARY, 1925

NUMBER 2

E. J. GOODWIN, M. D., EDITOR
901 Missouri Theatre Building, St. Louis, Mo.

PUBLICATION { W. H. BREUER, M. D., Chairman
COMMITTEE { C. B. FRANCISCO, M. D.
M. A. BLISS, M. D.

ORIGINAL ARTICLES

THE UPPER URINARY OBSTRUCTIONS—MEDICAL ASPECTS*

J. CURTIS LYTER, M.D.

ST. LOUIS

Urinary obstructions, whether they be calculous, malignant, cicatricial, or prostatic, present aspects which are distinctly medical when they are associated with pain, tumor formation, or severe grades of general anemia. The interests of the internist, of course, are distinctly medical since whatever the etiology of the obstruction may be the treatment is practically always surgical.

Probably the portion of the symposium assigned to me will be most completely served if I endeavor to discuss the general diagnostic problems presented by the symptom of pain, tumor formation, and general anemia as they are usually presented in the symptomatology of urinary obstructions. The symptom pain is probably the most common for which an individual seeks relief. The pain of urinary obstruction may vary from a mild and vague discomfort to an agonizing, paroxysmal or continuous, periodic or constant pain. The pain may or may not be characterized by certain types of radiation and its location to some extent only is determined by the location of the obstruction. In this relation one might review the facts that a typical renal colic on one side of the abdomen might be caused by a calculus in the opposite kidney. So frequently in this phenomenon observed that my good friend, the late Samuel T. Lipsitz, constantly requested an X-ray examination of each kidney when the pain, presumed to be caused by a calculus, was located on one side only. Upon numerous occasions I saw him demonstrate a stone in the pelvis of one kidney as a cause of a pain in the opposite lumbar region.

Since the pain caused by obstruction of the urinary passage is so variable in its onset, character, location, and reflection it becomes almost necessary for the diagnostician to review, at

least mentally, the numerous thoracic, abdominal, neurological, and osseous diseases which may cause pains in the lumbar, abdominal, or pelvic regions. This alone can be his contribution toward a correct diagnosis.

The thoracic conditions which should be carefully reviewed are in most constant relationship with the pleural and the vascular systems. Pachypleuritis of tuberculous or non-tuberculous origin, with or without diaphragmatic adhesions, may produce abdominal pains on either side and can be excluded by the absence of the respiratory syndrome of chronic cough, expectoration, or dyspnea, and certain physical signs as changes in the tactile fremitus, respiratory murmurs, the spoken and whispered voice sounds, and the percussion note over either chest posteriorly. It might be well at this time to review the fact that the periphery of the diaphragm, as well as the abdominal wall, is supplied by the lower six intercostal nerves while the central portion of the diaphragm receives its supply from the phrenic. An acute attack of peripheral diaphragmatic pleurisy may closely simulate the pain of an acute ureteral obstruction and since the pain of either may be markedly accentuated by deep inspiration the differentiation is at times most difficult. However, the associated cough, dyspnea and at times moisture over the lower pulmonary lobe posteriorly will render the diagnosis certain.

The pain and discomfort of acute pericarditis and of the syndrome described as angina pectoris are so frequently associated with abdominal pains that a close study of the heart and pericardium is necessary, at least where the abdominal syndrome is not characteristic. The presence of a pericardial friction rub, some primary disease with which pericarditis is frequently associated, and the tendency of the pain to be referred toward the shoulders will usually be sufficiently clear to explain the abdominal symptoms in the pericardial cases. The physical evidence of cardio-aortic sclerosis, aneurysm, or mediastinal adhesions and tumors are usually so pronounced that a basis for the anginal attacks, whether they be of the pectoral or abdominal types, is easily discerned.

In discussing the abdominal diseases which

*Read by title before the sixty-seventh annual meeting Missouri State Medical Association, Springfield, May 6, 7, 8, 1924.

should be carefully reviewed in the course of a diagnosis of urinary obstructions and especially as these obstructions might involve the renal pelvis and the ureters, it probably will be better to consider the abdominal conditions simulating first obstructions of the right urinary apparatus and follow this by the consideration of those which simulate obstructions of the left urinary apparatus. The two conditions most difficult to differentiate from right renal or ureteral colic are attacks of biliary colic and acute appendicitis. In excluding the attacks of biliary colic a careful history, evaluating as far as possible some abdominal infection such as typhoid fever, pelvic infections, and colonic infections, should be carefully considered. After years of study one is thoroughly convinced that most gallbladder diseases of the infectious and calculous types are secondary to a previous infection within the anatomical confines of the portal system. The absence of such infection is well worth weighing in excluding biliary infections. Again the location of the pain due to biliary diseases is usually in the right hypochondrium and the epigastrium, and in only the most intense attacks does the pain radiate over the abdomen or toward the pelvis, the characteristic radiation being toward the right lumbar and thoracic regions and the shoulder. Personally, functional gastric disturbances have been noted much more frequently in association with biliary diseases than with diseases of the urinary apparatus. Consequently, the prolonged syndrome of functional gastro-intestinal disturbance probably is more indicative of a biliary than a urinary disease. Certainly if the attack of pain is followed by jaundice or a high bile content of the blood, a diagnosis of biliary disease would be more likely.

Attacks of appendicitis, whether they be acute or subacute, are at times most difficult of exclusion. However, if one will remember that as a rule the initial pain of an appendicular attack is located in the epigastrium, that within a few hours the pain spreads over the entire abdomen, and later becomes localized over the right iliac region and is associated with muscular rigidity and followed by tenderness over the right iliac region, the exclusion will not be so difficult. Again a rise of temperature is the exception in attacks of urinary obstruction while it is probably the rule in attacks of appendicitis. In those attacks not so typically characterized one must rely upon a careful analysis of the clinical history, especially as it relates to functional gastro-intestinal disturbances and upon tenderness over the appendix, to either exclude or verify this diagnosis. It should be remembered that vesical tenesmus and urinary frequency are not at all uncommon in appendicular diseases.

Before leaving the consideration of diseases of the right side of the abdomen, one should give some consideration to the pain associated with perihepatitis. While this condition is not frequently recognized, it nevertheless exists and its symptom complex is more or less characteristic. There are usually pains, either of an acute or chronic type, periodic or continuous, sharp or dull in character, located in the right hypochondrium, usually referred to the right lumbar region, and distinctly increased by deep inspiration. Personal observation indicates that there is usually a tenderness upon bimanual palpation of the liver associated with this condition. Frequently, too, it is associated with chronic gallbladder infections and is usually secondary to some previous infection within the anatomical confines of the portal system.

The medical conditions which should be excluded in the course of the procedure of making a diagnosis of obstructions in relation to the left kidney or ureter are less numerous than those just delineated in regard to the right kidney. Probably the most common source of confusion can be found in the spleen, descending colon and sigmoid. Acute or subacute attacks of diverticulitis of the descending colon or sigmoid should always be excluded before a diagnosis of urinary obstruction is made. The most positive method of excluding this disease is the fluoroscopic examination during a barium enema as here frequently, in fact most commonly, we see the diverticuli filled with barium and the recognition becomes easy and simple. In this disease the location of the pain, its onset, radiation and termination closely coincides with that of urinary obstruction on the left and since urinary obstructions may frequently be associated with temperature, rapid pulse, and other evidences of infection, it becomes necessary to at least review diverticulitis mentally.

The affections of the spleen such as perisplenitis, infarcts, and the spleen of leukemia, Banti's disease, and other splenomegalies are at times associated with acute attacks of pain which may simulate those of urinary obstructions. However, upon careful palpation the spleen is found to be enlarged, tender and freely movable. These physical signs with a blood examination, and where a primary disease exists, a knowledge of this disease will always suffice to exclude the splenic syndrome.

Certain other abdominal conditions, notably perforation of a gastric ulcer, acute hemorrhagic pancreatitis, and pelvic conditions in the female such as salpingitis, small cystic ovaries with twisted pedicles, and recurrent attacks of pelvic peritonitis must be considered in relation to pain which could be caused by an

obstruction of urinary apparatus either on the right or left side. However, a study of the previous digestive history and certainly an X-ray examination of the stomach will exclude the perforating gastric ulcers. It is quite remarkable how certain types of gastric ulcer which show subacute attacks of perforation will simulate very closely the syndrome of upper urinary obstruction. A case of this type was recently under the writer's observation and since there was no previous history of gastric disturbance between the attacks of pain and since the attacks of pain were so very typical of renal colic, one of my assistants made a positive diagnosis of left renal colic which could not be proved by urologic examinations. Upon X-ray examination of the stomach it was found that she had a subacute perforating ulcer of the stomach with the perforation involving the pancreas. The stomach was later resected by Dr. McKay and the patient entirely recovered. A careful examination of the pelvic organs will always exclude the possibility of pelvic diseases such as enumerated above.

The neurological conditions which should be excluded are mainly those affecting the posterior roots or columns. Any spinal disease which involves the posterior roots or columns may have as an associate severe attacks of abdominal pain designated as crises. Especially is this true in that very common disease known as tabes. It, however, can be similarly true in any disease of the spinal cord affecting the sensory pathways. Consequently it is necessary to review not only tabes but spinal cord tumors, anyotrophic lateral sclerosis, multiple sclerosis, and syringomyelia. These spinal cord diseases are not difficult of exclusion if one will take time and pains to investigate the deep and superficial reflexes, the spinal fluid, and the previous history of the patient because it is impossible for a spinal cord disease sufficiently advanced to produce such attacks of pain to exist without revealing itself in either abnormal reflexes or spinal fluid changes.

The osseous conditions of the spine which may give rise to symptoms simulating urinary obstructions are those caused by tuberculosis, chronic arthritis, and malignancies. A physical examination of the spine with regard to its flexibility, rotation, and associated muscular rigidities together with a careful stereoroentgenographic study of the vertebrae will always disclose the presence of either of these disease processes.

Where the urinary obstruction has existed for some length of time and has become more or less complete, there very frequently develops as an associate of the obstruction an enlargement of the involved kidney with the

formation of a tumor mass in this anatomical area. On the right the tumor mass may be confused with an enlarged gallbladder, an enlarged liver, a tumor of the ascending colon or cecum, or with a hypernephroma. A history of chronic indigestion, a previous attack of typhoid fever or some other infection within the anatomical confines of the portal system, a history of jaundice or typical attacks of gall stone colic together with the size, shape, and position of the tumor mass will usually suffice to either make a positive diagnosis of gallbladder enlargement or the negative evidence will be sufficient upon which to exclude this possibility. The anatomical position and configuration of the liver is so characteristic in all liver enlargements as to render a recognition of an enlargement of this organ very easy in a great majority of the cases. Probably the most valuable of all the physical signs in relation to the enlargement of the liver is the palpation of the lower margin and a recognition of the notch between the left and right lobes. A tumor arising from the cecum or ascending colon is usually the result of tuberculosis or malignancy and upon trophoscopic examination there will be found irregularities and filling defects in either the cecum or ascending colon sufficient to render the diagnosis positive. In the case of malignancy I might mention also that the continuous reaction for occult blood in the stool while the patient is upon a blood free diet is most valuable.

The conditions which must be considered in studying a tumor of the left renal region are enlargements of the spleen and tumor masses arising from the descending colon and sigmoid. The anatomical configuration of the spleen with its well defined notch and the fact that usually the splenic flexure of the colon lies behind a tumor caused by an enlargement of the spleen and in front of a tumor resulting from an enlargement of the left kidney will usually lead one to the correct differentiation. Again the study of the blood in a great majority of the splenic enlargements will offer some very positive evidence. Tumors arising from the splenic flexure, descending colon, or sigmoid can be recognized by the same methods as those described under the cecum and ascending colon.

In this portion of the symposium no attempt has been made to review the positive findings, both in the urine and upon careful urologic examination, which are usually present in upper urinary obstructions since I am quite positive this field will be most thoroughly covered by the succeeding essayist. Suffice it to say that in some cases of urinary obstruction it is necessary to have absolute cooperation between a well trained internist and a well

trained, conscientious urologist. Dr. Moore will probably show some plates which demonstrate at times the great difficulty in recognizing urinary obstructions.

Frisco Building.

OBSTRUCTION OF THE UPPER URINARY TRACT FROM A SURGICAL STANDPOINT*

NEIL MOORE, M.D.

ST. LOUIS

Urology has doubtless undergone the most active investigations within the past twenty-five or thirty years of any specialty in medicine. From these investigations have evolved our modern methods of examination and treatment, namely, the various style cystoscopes, ureteral catheters, both plain and shadow-graph, pyelograms and ureterograms, various kidney functional tests, and the many operative instruments that may be used through the cystoscope, such as ureteral dilators, forceps, scissors, fulgurating incisors, etc.

Equipped with the modern urological armamentarium, a well trained urologist should make from ninety-five to ninety-eight per cent correct diagnoses of conditions affecting the genito-urinary system. Treatment with instruments through the cystoscope, where applicable, has also been very satisfactory.

This presentation shall deal with both the open surgical methods and the so-called closed surgical methods which include the various manipulations through the cystoscope. The data have been collected from observations made upon a fairly large series of cases in private and clinic practice.

If we, for a very simple comparison, will allow ourselves to think of the upper urinary tract, which is all of that part of the genito-urinary system lying above the ureter opening, to be represented by a river, such as the Mississippi River, with its many tributaries, then we can see how obstruction of one of the tributaries (a tubule or calix) or obstruction of the common drainage canal (ureter) will affect the area drained in direct proportion to the degree of obstruction.

Urinary obstruction may be congenital or acquired and the direct cause of the obstruction may lie inside or outside of the tract. Acquired conditions out-number the congenital ones, though we are learning daily that the latter are more prevalent than was formerly thought. Thus, we find strictures, stone, cystic degeneration and many extrinsic condi-

tions producing pressure, all of which have unquestionably existed since the time of, or before birth.

The more common intrinsic causes of obstruction are stone; stricture simple or inflammatory; kink of ureter with a normally placed kidney or associated with a movable kidney; ulcer with temporary spasm, which may be tuberculous or non-tuberculous; edema and swelling of the mucosa accompanying the various non-tuberculous infections; tumors of the kidney and tumors of the ureter, malignant and non-malignant; cystic degeneration of the kidney; urates and cystin crystals.

Extrinsic causes are, extrarenal arteries approaching the kidney in such way as to cause pressure on the pelvis or ureter, bony malformations, inflamed appendix, inflamed tubes, inflamed seminal vesicles, some abdominal tumors, constriction through the broad ligament, the pregnant uterus.

Remote or predisposing causes are, focal infections located most anywhere in the body.

Pain is the most constant symptom and varies according to the character and degree of obstruction. It is due to tension and back pressure of urine, except in the presence of stone where the factor of cutting enters into the causation. The pain may occur in sharp attacks or may be more or less constant and dull in character. It may be referred to some part of the urinary tract down the thigh or to some part of the back. It may also be referred to a point in the abdomen or chest. In many cases the pain is not referred, but is located at the point of trouble.

Frequent and painful urination together or separately are usually present at some time or throughout the disease. They are present in a variable degree in all obstructions due to infection, in most of the noninfectious obstructions located low in the ureter and many of them located higher up.

Hematuria may or may not be present in any stage of the disease due to any cause. To be of any great value as a diagnostic symptom or sign it is usually always necessary to eliminate the possibility of its origin in the lower urinary tract by cystoscopy. Hemorrhage may be one of the first symptoms complained of and in certain conditions it may, through the formation of clots, be the entire cause of the pain present.

Cases of long standing usually show pus or bacteria or both in the urine. They, however, are not constant findings though cloudy urine may be the chief complaint.

Chills and fever accompany the presence of infection and vary according to the degree of obstruction and character of the infecting organism.

Nausea and vomiting are reflex symptoms,

*Read by title before the sixty-seventh annual meeting Missouri State Medical Association, Springfield, May 6, 7, 8, 1924.

or are of a common etiology to that of the obstruction.

Complete urological examination is necessary for a satisfactory diagnosis. No one will discredit the value of a well taken history, though many diagnoses are made by a careful routine and complete examination in the absence of any history whatever.

The examination consists of inspection and palpation of the external genitalia and of the kidney, ureter and bladder areas; examination of discharges; complete chemical, physical, microscopical and bacteriological examination of a carefully collected specimen of urine eliciting the presence or absence of residual urine. Cystoscopy, ureteral catheterization noting the flow of ureteral urines, the pelvic capacity, examination of fresh specimens of each ureteral urine, differential kidney functional tests, plain X-ray plates of the entire urinary system, pyelograms and ureterograms of the suspected or of both sides.

Waxed tip catheters are often valuable in determining the presence of a stone in that small percentage of stones which by various methods of technic cannot be demonstrated by X-ray. They are frequently used to determine the caliber and location of a stricture.

Time and space do not permit a thorough discussion of the few diagnostic points peculiar to some conditions causing obstruction. Definite and satisfactory conclusions can only be deduced after carefully summarizing the symptoms complained of and the findings of a complete urological examination. Repeated examinations together with observation of the patient over a few days' time have frequently been necessary both in our office and in hospital work.

Retention in the blood of products normally excreted through the kidneys such as non-protein nitrogen, blood urea, uric acid and creatinin are common findings where there is obstruction. Many of our cases, with unilateral obstruction, partial or complete, or even obstruction in one calix have had high blood chemistry findings, and have shown improvement usually to complete relief after the obstruction was removed. Where nephrectomy has been necessary the cases have shown equally as satisfactory improvement as those where the obstruction was removed without nephrectomy.

In one case where there was an impaction of calculi in both kidney pelves and ureters the blood chemistry was normal and has remained so at subsequent examinations, even though the calculi apparently are increasing in size and number.

Many cases have presented themselves for examination complaining of symptoms refer-

able to the urinary system. After examination with negative urological findings these should become the problem of a competent Internist. Dr. J. C. Lyter has presented the various points in differential diagnosis in a well prepared paper of similar title.

Satisfactory treatment consists of complete removal of the obstruction and its cause. Nothing short of this will suffice.

Open surgery is resorted to for removal of stone impacted in the kidney substance, in a calix or when in the pelvis of the kidney and too large to pass downward; for removal of stone in the ureter of such size and shape or when so impacted it will not pass and after other manipulating attempts to dislodge have failed. The kidney should always be conserved when possible and expedient. Nephrectomy is necessary in most cases of kidney or pelvic tumor; all tuberculous kidneys; in multiple impaction of stones of one kidney, or where from any cause after observation and after careful examination before and at the time of operation definite signs of marked degeneration are present to such extent that the organ will remain more or less functionless or a continuous source of infection.

In the various operative manipulations through the cystoscope exists a very valuable and safe method of attacking, and satisfactorily treating a large percentage of upper urinary tract obstructions.

Ninety-five per cent of stones in the ureter in this series have been dislodged and ultimately passed into the bladder, after manipulation with catheters, dilators, etc.

Stricture at the ureter orifice has been cut with scissors, sharp incisors or with high frequency electrodes. Ureteral strictures or kinks have been dilated with one or multiple ureter bougies, with various sized catheters up to No. 11 French; with ureteral dilators or with retained catheter or catheters or bougies.

Injection of shadowgraph solutions or emulsions in taking pyelograms and ureterograms undoubtedly serve as dilators throughout the entire upper urinary tract. Many cases of chronic infection, or where pain has been present in the absence of infection have shown definite improvement from these injections alone, which necessarily includes the introduction of a ureter catheter.

Tumors of the lower ureter have been fulgurated with an ordinary Bugbee electrode and d'Arsonval current.

Internal medications have been of value to change the reaction of urine, to relax spasm, such as belladonna to the point of physiological tolerance, and to stimulate ureteral muscular activity where stone is present, such as surgical pituitrin subcutaneously. Acute attacks of

pain have been relieved, after the diagnosis has been made, with morphine and atropin subcutaneously.

CASE REPORTS

Case 1. E. B. White, male, aged 60. Twenty-seven years ago had stone removed from left kidney. Following the operation urine has been cloudy and has at times had some pain in left back, not referred. Three months ago while shoveling gravel had sudden attack of vertigo. Four days later attack of temporary unconsciousness accompanied with numbness in right arm and leg. He was referred by his physician for urological examination and treatment, April 5, 1923. Urine showed two plus pus, few red blood cells, albumin one plus and colon bacilli.

Cystoscopy: Right kidney urine negative. P.S.P. 36 per cent first hour. Left kidney urine showed pus two plus, colon bacilli, P.S.P., 25 per cent first hour. Blood pressure 160-82, X-ray and pyelogram showed two small stones at outer edge of kidney. May 7, 1923: Under general gas and ether anesthesia, left lumbar incision when old hernia of former operation and many adhesions around kidney were encountered. After isolating kidney with much difficulty, two small irregular shaped stones were found immediately under the fibrous capsule which apparently had necrosed through cortex, leaving a partially closed sinus connecting with the lower calix. The stones were removed and sinuses curetted and packed with iodoform gauze to control hemorrhage.

The patient made an uneventful recovery and when last seen, December 14, 1923, had just had a very slight attack of vertigo of short duration. The urine was virtually clear, though it contained a few pus cells.

Case 2. J. S. White, male, aged 25. In 1914 several stones removed from right kidney. One year later, right kidney removed by another surgeon for stones. Six months after nephrectomy he developed pain in left kidney, later passed small stone and has passed blood several times. When examined complained of almost continuous pain in left side and back, occasional chills and fever, frequent and painful urination.

Cystoscopy: Left kidney urine contained pus two plus, few colon bacilli and few large diplococci, P.S.P. 50 per cent first four, 10 per cent second hour. X-ray with pyelogram showed an elongated stone shadow obstructing the lower calices major with the enlarged part of the stone pointing toward cortex. N.P.N., 84 Mgm. Uric acid 4 Mgm. per 100 cc. of blood.

February 1, 1923, under general gas-ether anesthesia, a small incision made through cortex of lower pole of kidney, stone located and removed. Recovery uneventful. Soon after this, blood chemistry was normal. Patient was last examined January 12, 1924, when he had gained several pounds, felt good except for slight urinary frequency and an occasional pain in left back.

Case 3. Mrs. B. White, female. Complained of attacks of pain in right back and subcostal region radiating to thigh. Has passed one or two small stones, only moderate urinary frequency. Had been treated for gall stones for years until she came under the care of the referring physician, Dr. Julius Weinsberg. Has been asthmatic and unable to do household duties especially during attacks.

Cystoscopy: Left kidney normal. Right kidney urine showed few pus, few colon bacilli. P.S.P. virtually nothing. X-ray showed multiple shadows in pelvis.

Nephrectomy under local novocain anesthesia after preliminary injection of morphine and scopolamin. Kidney surrounded with dense adhesions. The pelvis contained four moderate sized stones.

There was considerable degeneration of kidney substance. Recovery uneventful aside from moderate wound infection which cleared up readily. About one month after leaving hospital the patient developed a respiratory infection and died of cardiac dilation.

Case 4. J. N. White, male, aged 30. In 1922 applied for life insurance and was rejected because of albumin in urine; took medicine for this from his family physician without satisfactory results. Soon developed dull, crampy attacks of pain in left back, which radiated to left testicle. Passed bright red blood on one occasion and about a month ago had difficult and frequent urination, which has subsided. No chills or fever, no night sweats. Had lost two pounds in weight.

Cystoscopy: Right kidney normal. Left urine free of pus and bacteria. P.S.P. Normal, X-ray and pyelogram showed a large stone shadow in left renal pelvis. September 22, 1923, under general gas-ether anesthesia stone removed through pyelotomy incision. Recovery complete.

March 22, 1924. Urine clear, free of pus, albumin and bacteria. Patient has gained ten pounds in weight.

Case 5. Mrs. B. E. P. White, female, aged 36. For the past few months has had attacks of pain in left back, which has been associated with constipation. No urinary disturbance until attack three days ago when frequency and burning began. Has been badly constipated during the last attack though she has had no opiates. In addition to pain in left kidney region she also has a sharp pain in left groin and bladder.

Cystoscopy: Oct. 12, 1923. Right kidney normal, left ureter orifice edematous and reddened. Obstruction to catheter at one and one-half inches. X-ray shows small shadow lower left ureter.

October 18, 1923. *Cystoscopy:* ureter orifice incised and lower ureter dilated.

October 21, 1923; *Cystoscopy:* after many efforts a stilette olive point catheter passed obstruction, then two other bougies inserted along side of first catheter passed the obstruction and retained. Urine drained freely from the catheter, indicating retention. The specimen showed pus and colon bacilli. P.S.P. did not appear. Forty-eight hours later the retained catheters were removed and that same afternoon the stone was passed from the bladder. X-ray then showed kidney and ureter free of shadows.

November 22, 1923; *Cystoscopy:* No. 6 French catheter passed readily to pelvis, the urine was free of pus and infection. The P.S.P. excretion was 30 per cent for first hour. General condition very good.

Case 6. Mrs. C. H. P. White, aged 30. For seven or eight years has had attacks of pain in left back, pointing anteriorly and radiating toward bladder, associated with frequent and painful urination. Of late the attacks have been accompanied with chills and fever.

Cystoscopy: Right kidney showed few pus and colon bacilli. P.S.P. 70 per cent first hour. Left urine much thick pus and colon bacilli. P.S.P. 10 per cent first hour. X-ray showed no stone shadows. The pyelogram was large, distorted and apparently sacculated. Typical pyonephrosis.

October 1, 1921. Under general ether anesthesia left nephrectomy. The kidney was large, soft and contained sacculations filled with purulent urine. The interesting part was a moderate sized extra renal artery crossing posterior to the uretero-pelvic junction in such manner as to cause definite constriction. Recovery uneventful.

October, 1922, patient returned complaining of dull pain in right back, with a moderate amount of frequency. Her general health has been good and she has gained several pounds.

Cystoscopy: Showed a small amount of pus and

colon bacilli in right ureter urine. One lavage of 1 per cent silver nitrate solution apparently relieved this as all subsequent reports have been good.

Case 7. Miss Pearl G. White, aged 20. In January, 1923, while a student at a school for girls had first attack of pain in right subcostal region with a suggestion of pain in the back. A few months later had definite pain in right back, not referred, accompanied with moderate urinary frequency. Now has almost constant dull pain in back, much urinary frequency, has lost considerable weight, feels badly and carries from one to four degrees of fever.

Cystoscopy: November 25, 1923. Left kidney negative. Right ureter opening surrounded with considerable edema and inflammation. Catheter was introduced with difficulty. Urine showed much pus, no bacteria, no acid, fast bacilli. P.S.P. 5 per cent first hour. X-ray negative for stone shadows. Pyelogram dilated and sacculated.

While waiting for the results of a guinea pig inoculation the ureter was dilated several times up to No. 11 French and pelvis lavaged. All symptoms improved, patient gained weight, and the P.S.P. output from right kidney improved to 15 per cent first hour.

January 5, 1924, right tuberculous kidney removed under gas anesthesia. Recovery uneventful and patient left hospital January 26th. March 14, 1924, urine almost clear, patient feels very good except for occasional slight attacks of frequent urination. She has gained forty pounds in weight.

Case 8. Mrs. M. M. White, aged 37. History of more or less urinary frequency all of life. Past seven or eight years has had dull pain in left back, not referred. With this had occasional attacks of chills and fever. Few months ago pain began in right back similar to that in left. Patient states she has been under the care of another urologist for the past eighteen months, and has been cystoscoped numerous times. There has always been much difficulty in introducing the left catheter; at times complete failure.

Cystoscopy: February 27, 1923, No. 6 French ureter catheters passed both sides with some difficulty. Right urine showed 2 plus pus, colon bacilli and staphylococci. P.S.P. output 20 per cent first hour. Left urine showed pus three plus, staphylococci two plus, P.S.P. 17 per cent first hour. The urine from the left pelvis was under moderate tension.

X-ray showed no stone shadows, the left pelvis was dilated. A course of ureto-pelvic lavages, autogenous vaccines and urinary antiseptics was followed with only moderate improvement in left kidney, but with marked improvement in right. The left ureter was then gradually dilated and finally a No. 11 F. catheter was introduced and retained for twenty-four hours. Later the ureter was dilated its entire length with a metal dilator. This was followed with marked satisfactory results. She voluntarily discontinued treatment May 29, 1923.

April 1, 1924, patient reports excellent health and no pain until one week ago, when, following a cold, she developed urinary frequency and some pain in left back. She is now under treatment and improving more rapidly than previously.

Case 9. I. B. White, male, aged 52. For the past fifteen years has had urinary trouble in form of frequency, no pain, and occasional attacks of chills, and fever. Has been under the care of another urologist for past three or four years, and has received many lavages with large doses of urinary antiseptics. About a year ago noticed "swelling" under both subcostal borders, which has gradually become larger.

Examination: January 4, 1923. A large mass was easily palpable and visible through a very thick abdominal wall under each costal margin. The masses

were very firm and when palpated produced a sensation of pain in back of the corresponding side.

The patient was anemic and appeared sick.

Cystoscopy: Catheters passed readily to pelves. Urine from both kidneys flowed freely, was light in color, and of low specific gravity. Right urine showed pus three plus, no bacteria, P.S.P. 5 per cent plus. The left urine showed pus three plus, no bacteria, P.S.P. 6 per cent minus. X-ray showed no stone shadows. Pyelograms were not made because of patient's weakened condition.

A diagnosis was made to the referring physician of bilateral congenital cystic kidney. Prognosis as to improvement poor.

Further reports from this case seem to substantiate the diagnosis.

Case 10. Mrs. R. W. Aged 32. July, 1923, Dr. H. S. McKay removed uterus and infected tubes and ovaries. The left ureter was found intimately involved in an inflammatory mass. It was necessary to expose and denude the ureter for a distance of two or three inches.

The post-operative course was stormy accompanied with continuous fluctuating fever, and occasional chilly sensations. There was no pain except that accompanying very frequent urination.

Cystoscopy: Left ureter obstructed at two and one-half inches. The obstruction was finally passed with a No. 6 olive point catheter. Almost pure pus infected with colon bacillus drained for twenty-four hours. Later another catheter was introduced and pelvis lavaged. Temperature then became normal and patient felt well enough to leave hospital latter part of August. September 17, 1923, had a chill with pain in left back. October 5, 1923, had chill and fever followed by leakage of urine through cervical stump. After this there were frequent chills and fever with continuous leakage. The right kidney was normal except for small amount of colon bacillus infection. Diagnosis of left ureteral fistula and beginning pyonephrosis.

November 12, 1923; left nephrectomy under gas oxygen anesthesia. Macroscopically the kidney appeared perfectly normal but upon section there were multiple microscopical abscesses throughout the entire gland.

The patient made a speedy, uneventful recovery and is enjoying excellent health. The infection in right kidney has completely subsided.

Case 11. A. T. H. White, male, aged 43. In 1920 had attack of pain left side and back, passed blood and had difficult and frequent urination. At that time the patient resided in another city. No examination was made other than negative X-ray.

He enjoyed good health until three weeks ago, when he developed pain in left back and left lower abdomen accompanied with frequent and painful urination.

There have been no chills or fever. Repeated urinalysis at another laboratory have shown the presence of pus, blood and albumin.

Cystoscopy: May 29, 1923, Bladder and urethra normal. Right catheter passed readily. Left catheter partially obstructed at two inches. There was no pus or bacteria in either ureter urine. The P.S.P. output was equal and normal. X-ray was negative.

The left seminal vesicle was swollen and tender. The expression contained pus and blood, no bacteria. A course of prostatic and vesicle massages and irrigations over a period of three months afforded complete and satisfactory relief which has continued to the present time.

Case 12. L. W. S. White, male, aged 32. Five days before applying for examination, July 20, 1923, while lying in bed had a sudden severe attack of pain in left back and left lower abdomen associated with marked frequency and difficult urination. The pain

was only relieved by injection of opiates administered by the family and referring physician, and would recur when the affect of the opiate had disappeared. There had been no chills or fever. Venereal diseases denied. Had never had such an attack previously.

Cystoscopy: July 21, 1923. Bladder appeared normal except for marked edema around left ureter opening. Right catheter passed readily, drainage free, urine negative, P.S.P. output normal.

Left catheter entered to a distance of about one inch when complete obstruction was met with. X-ray was negative for stone shadows.

July 23, 1923. Cystoscopy after subcutaneous injection of indigo-carmin solution and an injection of morphine and scopolamine. No dye was excreted from left opening, though freely from right. After many attempts a No. 6 olive point catheter, stiletted, was passed with difficulty to the left pelvis. Urine drained freely under much pressure. The specimen contained some pus, no bacteria, inoculation of guinea pig was negative. The catheter was left in place twenty-four hours with continuous drainage.

Cystoscopy: July 28, 1923. Ureter dilated with No. 11 Garceau catheter, specimen of left ureter urine was free of pus. The patient left hospital free of pain and feeling good.

October 13, 1923. Reports having a little dull pain in left lower abdomen. There has been no urinary disturbance. Ureter dilated, specimen negative, function good. Later reports are good and he has gained considerable weight.

Case 13. White, male, aged 37. Three months before applying for examination, in July, 1921, patient first noticed pain in perineum and penis, which was aggravated by walking and occasionally had pain when sitting. There has been no pain in back or abdomen. Urinary frequency moderate with some pain and once passed blood. No chills or fever. A course of prostatic massage and instillations administered by the referring physician had given very little relief.

Cystoscopy: Left ureter opening normal. The right ureter opening could not be seen. While searching for the opening suddenly a bulging mass appeared in the region where the opening should be. After closely observing, the cyst like swelling appear and disappear as the ureter expelled urine, the ureter opening was located as pin point size on the cyst, and expelled a very fine stream of urine. It was impossible to insert a catheter or bougie. The opening was enlarged with fulguration and dilated with a catheter. The patient had complete relief, after the edema following the fulguration had disappeared, which so far as we have been able to learn has continued to the present.

Case 14. Mrs. L. D. White, female, aged 70. Has had trouble with urine in the form of frequency for past seven years. In the past few months has had very frequent urination, about ten or twelve times a night, and occasionally passes some blood. She has a more or less constant pain over the left lower abdomen, which extends up in to the left back and kidney region.

The referring physician had cystoscoped several times and had located a small tumor like mass projecting from the left ureteral opening. It had been impossible to catheterize the left ureter.

Cystoscopy: January 2, 1922. There was much edema around the left ureteral opening accompanied with considerable inflammation. There was a small tumor apparently connected to the lateral wall of ureter above the opening, the peripheral end of the tumor extending out through the ureteral opening. This tumor appeared to be a typical papilloma. One fulguration with a Bugbee electrode and d'Arsonval current, inserting the electrode up to where the base

of the tumor was supposed to be was followed by a complete slough and discharge of the tumor.

After this the ureter was dilated, the kidney function found to be good and the patient was given one course of X-ray treatment.

All symptoms subsided and she has enjoyed good health until about the first of April, 1924. She reports a small amount of bladder irritation and a suggestion of pain in the left kidney region.

Cystoscopy: April 14, 1924, revealed a perfectly normal bladder, no recurrence of tumor, though the left opening is held open by scar tissue. A No. 6 catheter passed readily. The urine from the left side was in good condition.

CONCLUSION

A study of the case reports submitted where the striking similarity of symptoms exist in a series of entirely different conditions would seem to justify the following conclusions:

All cases with symptoms and signs pointing to the upper urinary tract require a thorough and complete urological examination before a diagnosis is made. Treatment should be judiciously applied according to the condition existing.

Frisco Building.

THE CREATININE TEST FOR RENAL FUNCTION*

RALPH H. MAJOR, M.D.

KANSAS CITY, MO.

The introduction of renal functional tests marks a new era in the study of a group of diseases which have always exacted a terrible toll of human life. A careful study of the functional ability of the kidneys has clarified many obscure problems of physiology, has introduced clearer and more exact clinical thinking, has given us a basis for more rational therapy and has reduced the mortality among our patients.

We have learned that all patients with high blood pressure do not have nephritis and this knowledge alone has greatly influenced our pronouncements on prognosis and softened our previous rigorous regimens. We have learned when to operate boldly on our kidney and prostate cases and when to go slowly or not at all. And with what imperfections our knowledge of renal function still possesses, many of us wish that we could tell as nearly what the heart or lungs or liver can do as we can tell what the kidneys are capable of doing.

In introducing creatinine as a test for renal function, no effort is made to express dissatisfaction with the great number of tests now in use or proposed from time to time. It is of

*Read before the sixty-seventh annual meeting Missouri State Medical Association, Springfield, May 6, 7, 8, 1924.

unquestioned value in studying renal excretion to study the excretion of various substances. The study of any problem of disease from many different angles undoubtedly gives us a clearer and broader insight that assists in solving that problem.

Aside from a study of the blood chemistry, most of our renal functional tests are based upon the principle of excretion of a dye stuff by the kidney. The phenolsulphonephthalein test of Rowntree and Geraghty is unquestionably the most widely used test of this kind and while everyone admits its great value in many cases, some of us recall instances where this orthodox procedure has failed us or given us misleading information. Phenolsulphonephthalein is rapidly destroyed by the liver and there is also excellent evidence that it may be destroyed when there is poor oxygenation of the tissues due to faulty circulation. Such destruction in the body reduces the urinary excretion of the dye and may lead to erroneous conclusions regarding renal function. Mayrs has recently brought forward evidence that phenolsulphonephthalein is excreted by the kidneys through a different mechanism from that employed in the excretion of urine and other nitrogenous bodies and inorganic salts, and he doubts the propriety of using its excretion as an index of renal function.

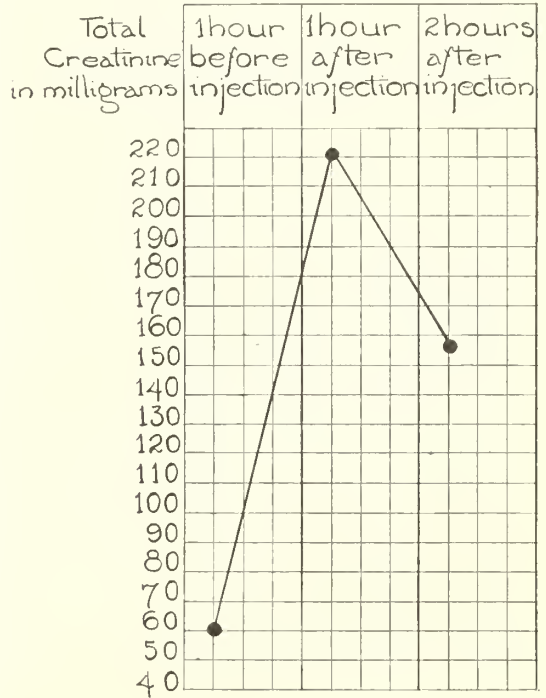
Creatinine possesses certain properties that should make it an excellent substance for testing renal efficiency. It is an end product of protein metabolism, it is not toxic, it is excreted by the normal kidney with great ease and this excretion by the same individual under uniform conditions is remarkably constant. Its estimation by the method of Folin is extremely simple and any laboratory equipped with picric acid, sodium hydroxide and a simple colorimeter can carry out a determination in ten minutes.

The principle underlying this test consists in the estimation of the creatinine excretion by the patient before and after the introduction of creatinine into the circulation. We have modified our technique some from time to time but are now employing the following procedure:

The patient empties his bladder just before the test is started; he is then given a glass of water and the urine collected at the end of an hour. He is then injected intravenously with .25 gm. of creatinine dissolved in 5 c.c. of buffer solution (Ph. 7.2), given a glass of water and the urine collected again at the end of one hour. He then receives another glass of water and another collection of urine is made at the end of two hours following injection. The total amount of creatinine in all three samples

of urine is then estimated and the excretion in the two specimens after injection is compared with the excretion before the creatinine was injected.

In normal individuals we find that when this test is carried out the kidneys in the hour following the injection excrete from two to three times as much creatinine as was excreted before injection. (Fig. 1) During the second



Typical Normal Response
Phthalein 60% in 2 hours.

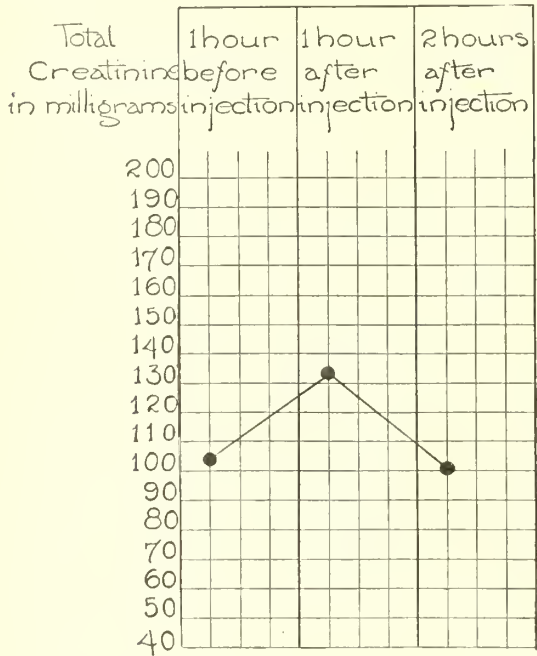
Fig. 1

hour after injection from 50 to 100 per cent more is excreted than during the pre-injection hour.

Similar curves were obtained on patients suffering from essential hypertension, diabetes mellitus and various other diseases with no renal involent. The average excretion in patients suffering from essential hypertension was not so great as in normal individuals while many patients with diabetes mellitus showed a greater excretion than normal, a condition probably referable to the marked diuresis associated with this disease.

In chronic nephritis a very different type of curve is obtained, the creatinine excretion during the hour after injection showing as a rule only a slight rise over that of the pre-injection period. (Fig. 2) In some severe nephritics the curve of creatinine excretion, instead of showing a sharp peak following injection like

that of a normal individual, showed on the contrary a fall, an inverted peak as it were. (Fig. 3) This type of curve is interesting and apparently of some prognostic import. It has been found in severe human nephritis and in experimental uranium nephritis where the creatinine test is carried out every day; it appears in animals during the second and third day after administration of uranium, at the time when the nephritis reaches its maximum intensity.

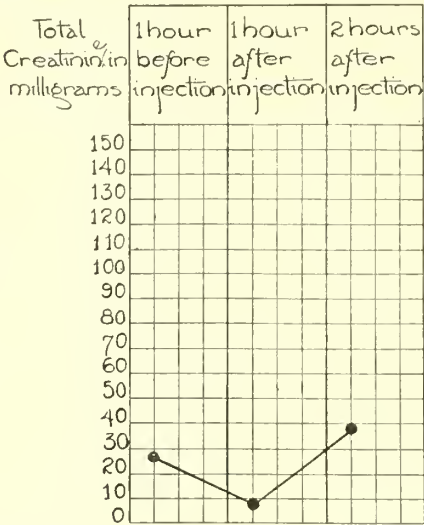


Typical Nephritic Response
'Phthalein 15% in 2 hours -
Fig. 2

These observations on the creatinine test indicate that while the kidney in health responds to an increase of creatinine in the blood, produced by injection, with a sharp increase in the output in the urine, in chronic nephritis the damaged kidney is unable to respond with a greatly increased diagnosis and in prognosis. In a number of patients the results of this test have given us a more accurate idea of the functional ability of the kidney than was obtained from the phenolsulphonaphthalein test. In several cases of bad cardiac decompensation where the 'phthalein output was low, a normal creatinine test has led us to exonerate the kidneys, a conclusion confirmed by autopsy.

Fig. 4 shows the results of the creatinine test on a patient with a marked aortic insufficiency, who had a phenolsulphonaphthalein of only 30 per cent in two hours on intravenous injection. The creatinine test, how-

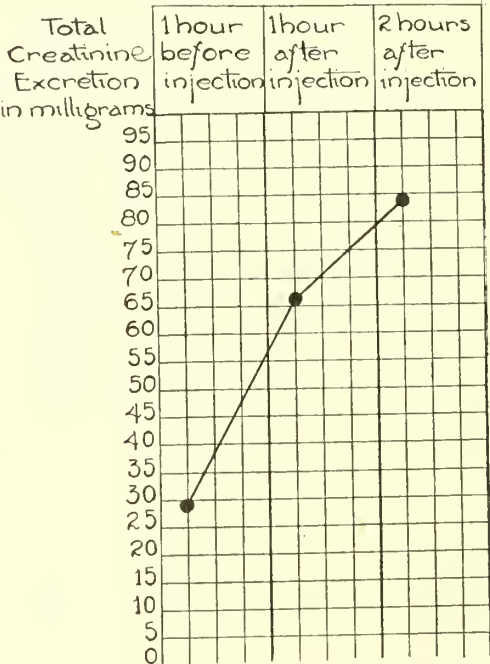
ever, showed a good excretion and a diagnosis of pure aortic insufficiency was made. Autopsy showed the kidneys to be normal except for



Nephritic response with inverted curve
'Phthalein 40% in 2 hours—later died of uremia.

Fig. 3

chronic passive congestion. Similar results have been obtained in a number of cardiac patients. As is well known, the phenolsulphonaphthalein test often fails to differentiate between chronic passive congestion of the kid-



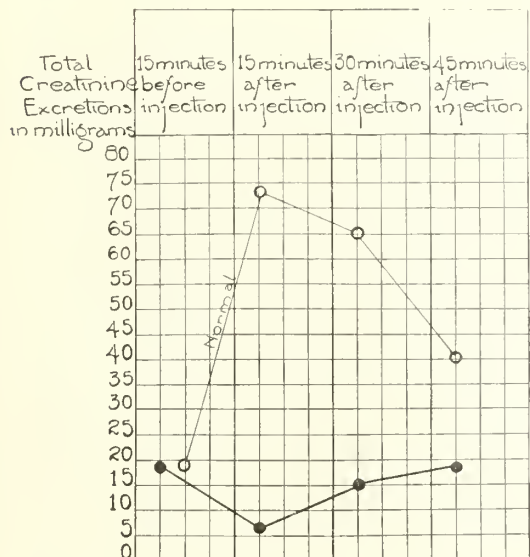
F.T. Aortic insufficiency [necropsy].
'Phthalein 30% in 2 hours [intravenous].

Fig. 4

neys and chronic nephritis. Our experience thus far indicates that the creatinine test may differentiate these two conditions.

The patient illustrated by Fig. 5 had an adequate phenolsulphonethalein excretion but a nephritic type of creatinine curve. This patient, who was pregnant, died a few days later in eclampsia and necropsy showed the presence of a chronic nephritis.

We have also used a modification of our method by collecting the urine at fifteen minute periods instead of at hourly intervals. The



M.S. Chronic nephritis [necropsy].
 Phthalein 55% in 2 hours [intravenous]
 Urea 20 mg per 100 cc.
 Creatinin 1.7 " " 100 cc.

Fig. 5

same type of curves are obtained by this method which permit of the same conclusions. This modification permits us to study by ureteral catheterization the functional ability of the individual kidney and will, we believe, be of great value in certain surgical cases where we wish to know whether one kidney or both kidneys are involved in the disease process.

In summary this test in our hands has proved a real addition to our armamentarium of renal functional tests. It is easy to carry out, is quite harmless and the laboratory procedures involved are simple. One caution however must be constantly emphasized. Collections of urine must be made accurately and we must be sure that the entire contents of the bladder is secured at each collection.

1111 Rialto Bldg.

DISCUSSION

DR. CLINTON K. SMITH, Kansas City: I am sorry I did not have an opportunity of thinking over this

subject before attempting to discuss it. However, I believe this is a very valuable addition to our equipment in the way of functional renal tests. In a great percentage of our urological surgical problems, the function of the kidney is the key to the situation, particularly in handling cases of prostatic hypertrophy. I am not prepared at this time to say whether or not in the renal insufficiency cases with which we have to deal in prostatic hypertrophy that we are dealing with the same proposition that Doctor Major has set forth. I know that these lowered kidney functions which we encounter with prostatic obstruction do return to more or less normal under proper treatment. I do not know whether that is true in nephritis or not. It is true, however, that phenolthalein alone as an indicator of renal function is not dependable. The phthalein output varies and in making phthalein estimations it has been my practice to keep a daily record of the output for a week or ten days before attempting to draw very definite conclusions from the phthalein as an indicator of kidney function.

We have been groping around for some other evidence in trying to establish the functional capacity of these kidneys in prostatic hypertrophy before operation. It appears from Doctor Major's work that this creatinin test is probably a less variable test than phthalein, and if that is true it certainly is a valuable addition to our diagnostic equipment.

I have not had the opportunity to follow it in surgical cases. As Doctor Major has shown, it certainly is a very clear indication of the condition in cases of nephritis, and I see no reason why it cannot be applied in surgical cases as well.

DR. RALPH H. MAJOR, closing: I think that this test offers, at least theoretically, certain advantages over phthalein. Creatinin is a substance which is normally excreted by the kidney and is not in any sense a foreign body. I think Doctor Mayr has recently brought out very good evidence to show that phthalein is secreted by the kidney through an entirely different mechanism from that employed by the kidney in excreting urea and other substances.

In closing I wish to emphasize the necessity for very accurate collections of urine. Unless the collections of urine are made promptly on the minute the test is of no value. We can tell in normal individuals whether the specimen is for one hour, or for one hour and ten minutes, by the estimation of the creatinin in the urine. It is necessary to make collections promptly and also to be sure that the bladder is completely emptied at the time of each collection.

MANAGEMENT AND RESULTS OF DEEP THERAPY IN TUMORS OF THE BLADDER AND PROSTATE*

PAUL C. SCHNOEBELEN, M.D.

ST. LOUIS

By deep X-ray therapy I mean X-ray treatment produced by energizing an 8 M. A. Coolidge tube with 200,000 volts and 5 M. A. at 50 cm. skin distance with 1 mm. of copper and 1 mm. of aluminum filter. The object of the filters is to reduce the superficial, long or

*Read before the sixty-seventh annual meeting Missouri State Medical Association, Springfield, May 6, 7, 8, 1924.

burning X-rays and permit the short, hard X-rays to act on the underlying tissue.

This action, according to various opinions, may be stimulating or depressing and destructive. In this report the action of the X-ray is taken to be destructive to produce improvement of symptoms. However, I feel that it is entirely possible to produce improvement by using small amounts of X-ray for the stimulating effect.

The amount of X-ray or number of units employed is based on the skin erythema dose. This dosage may be determined before treatment by the Dessauers chart, a set of graphic charts stating the number of units at the surface and at various depths within the body treated. An ionization chamber may be used to determine the amount of X-ray passing through a given subject, but this is a very delicate instrument, difficult to control in an X-ray treatment room and has not been employed in our department at the Jewish Hospital. It has been observed that the dosage indicated by the charts can be increased 10 to 20 per cent with an apparent improvement in the efficiency of the treatment.

The time factor is the most easily controlled and obviously important. The time of exposure with our present idea of treatment and equipment is considerably longer than with the older equipment or lower voltage. As an example, the time required to administer an efficient dose of X-ray to a patient weighing 150 lbs., with a tumor of the bladder and prostate, is approximately four hours. This treatment is given over periods of from 15 to 30 minutes, once or twice a day, depending entirely upon the patient's physical condition and reaction. This treatment of four hours is not repeated for six weeks, at which time the results of an examination determine the repetition of the treatment.

This short paper is a preliminary report of the clinical observations in the treatment of tumors of the bladder and prostate from personal experience.

In the series of 10 cases, 7 were inoperable due to the extent of the tumor or to some serious complication. Five are living and 2 dead. One of the 5 living cases was not benefited by X-ray and radium emanation was advised. Three of the series were given post-operative deep therapy for the effect of the X-ray on any remaining tumor cells. The 4 cases inoperable and treated are reported in detail on account of their clinical interest.

Case 1. J. R. Male, age 65. Entered the hospital November 8, 1922. Diagnosis of carcinoma of the bladder, inoperable. The general examination revealed an emaciated individual weight 120 pounds, complaining of frequent, painful urination. *Urol-*

ogist report. Rectal examination: Prostate large, hard and nodular. It extends to both sides into the bony pelvis. Upper border can be reached by palpating finger. Cystoscopic examination: Urethra free, bladder capacity 75 c.c. Entire left half of bladder and base, with part of the right side at the base extending above to level of the right ureteral orifice, presents an irregular infiltrated mass comprising many large polypoid appearing processes. These processes present a smooth, velvety surface and suggest solid formation; no ulceration. That part of the bladder not involved shows considerable trabeculation. Sphincter margin throughout its entirety is bulging inward and is also the seat of the many processes described above which by their irregular position gives the sphincter a very bizarre appearance. Neither ureteral orifice is clearly observed. Impression: Maligancy, inoperable.

Treatment: Deep therapy. First course December 5, 1922, 216 minutes. Second course, January 11, 1923, 216 minutes.

Urologist report. February 16, 1923. Rectal examination: Prostate smooth, small, regular and not fixed. Both lobes symmetrical. Vesicals not palpated. Cystoscopic examination: Urethra free, bladder capacity 250 c.c. Bladder mucosa, pale, yellow and apparently normal. Both ureteral openings easily seen, normal in appearance and position. Internal meatus normal. Bladder slightly trabeculated but none of the pathology visualized as noted in first examination.

Urologist report, May 3, 1924. Rectal examination: Prostate feels normal. Cystoscopic examination: Urethra free, bladder capacity 250 c.c. without complaint of distention. Mucous membrane normal. Ureteral and vesical outlets are normal. Impression: No evidence of pathology noted in urethra or bladder. Clinical observation, May 3, 1924: Patient has no complaint of the genito-urinary system; general condition is good. Weight 145 pounds. Gain of 25 pounds since first observation.

Case 2. A. M. Male, age 69. Entered hospital March 19, 1923. Clinical diagnosis, carcinoma of the bladder and prostate. General examination revealed patient with mild, generalized arteriosclerosis and suspected carcinoma of the prostate. *Urologist report.* Rectal examination: Prostate enlarged, hard, firm, fixed, symmetrical. Cystoscopic examination: Urethra free. Bladder capacity sufficient. Small nodule, two times the size of a thumb end, on the left lateral wall of bladder posterior to prostate; appears solid, much bleeding.

Treatment. Tumor fulgurated. Deep therapy. First course, March 16, 1923, 180 minutes. Patient returned for observation May 3, 1923. All urinary symptoms subsided, no hematuria, general condition improved. Cystoscopic examination: Bladder capacity good, no bleeding. Tumor one-third smaller. No other observations of importance.

Treatment, May 4, 1923. Second course of deep therapy, 180 minutes. Clinical report, September, 1923. General condition good. No complaint of bladder trouble.

Case 3. W. C. Male, age 64. Entered hospital January 15, 1923. Clinical diagnosis. (1) Carcinoma of the prostate; (2) generalized arteriosclerosis, cardiorenal complex prominent; (3) emphysema. *Urologist report.* Rectal examination: Two distinct nodular lobes on the left two or three times as large as right, possibly a little more firm than right side. Cystoscopic examination: Residual urine three-fourths of an ounce. Very large globular lobe posterior, filling a good portion of bladder and covering trigone completely. Lobe smooth except on left side of median line where a nodule, size of an olive, extends into bladder and is necrotic at the base. This evidently is source of bleeding. Impression: Carcinoma of the prostate.

Treatment. January 15, 1923, deep therapy, 144 minutes. Second course, May 3, 1923, deep therapy 180 minutes. Third course, August 18, 1923, deep therapy, 180 minutes. Clinical report, May 1, 1924: General condition only fair due to arteriosclerosis. Bladder symptoms relieved except nocturia, probably due to general condition and medication. Prostate somewhat enlarged, soft, freely movable and not tender.

Case 4. M. A. Male, age 66. Entered hospital March, 1924. Complaining of pain in the bladder area, difficulty of starting and stopping urine, with a frequency of urination. *Clinical diagnosis:* (1) Chronic cardionephritis, hypertension type; (2) carcinoma of the prostate with obstruction. *Urologist report.* Rectal examination: Prostate generally enlarged, right lobe being about one-half larger than the left, consistency hard throughout, surface nodular. Entire gland is firm and fixed. Cystoscopic examination: Residual urine 15 ounces. Bladder mucosa congested and numerous trabeculations present. Enlargement of both lateral prostatic lobes. A notch above the median lobe. Sphincteric margin bulging inward but presents no nodules of infiltration. There is a contracture of the vesical neck. Impression: Carcinoma of the prostate.

Treatment. March 20, 1923, deep therapy started and in 4 days residual urine was reduced to 8 ounces. The patient was voiding without difficulty. The pain was relieved. The patient was discharged from the hospital and advised to return in three or four weeks for observation.

DISCUSSION

Cases 1 and 2 have been observed for 17 months and 14 months, respectively. The prognosis in each case was regarded as immediately fatal with a very uncomfortable course. Treatment was advised for relief only and to date all clinical symptoms have been relieved. Microscopical sections were not obtained. However, the surgeons felt confident in making a diagnosis of malignancy from the clinical evidence.

Cases 3 and 4 present a type of prostatic pathology that may be malignant or benign. The clinical evidence strongly indicates malignancy and these cases were treated with this diagnosis.

Case 3 is a type of patient that presents much difficulty in planning the proper procedure. He was advised to take treatment first and then be operated. The symptoms were relieved by treatment and operation later was refused. At this time the bladder symptoms are relieved and the prostate is soft, somewhat enlarged, freely movable and not tender.

Case 4 is included in this report to demonstrate the immediate results of treatment. The residual urine was reduced from 15 ounces to 8 ounces in 4 days. All pain and discomfort were relieved. There was no marked change in the size of the prostate from rectal palpation.

COMMENT

For the apparent successful treatment of these cases it is important to know and understand thoroughly all the clinical and laboratory findings. Each patient can be treated with the same general plan but exceptions must be made in particular cases. About 50 per cent of all the bladder and prostate cases treated have been hospital patients. The other half of the cases have come to the hospital daily or every other day for treatment.

The reaction following treatment is quite variable. A few patients have only a loss of appetite. A certain number have nausea and a mild diarrhea. No cases with bladder and prostate treated have suffered from severe X-ray sickness. To combat the X-ray sickness all cases are put on a carbohydrate diet, where there is no contraindications. Fruit juices, such as lemonade, orange juice and grapefruits, are given frequently. In cases of severe sickness intravenous injections of glucose seem to give definite relief.

Severe local or skin reactions, proctitis or urethritis have not been observed. The loss of pubic hair frequently occurs.

The blood picture is examined and if the red count is below 2,000,000, a transfusion is indicated. The effect of X-ray on the blood does not show a permanent change in the normal cells.

There has been no evidence of injury to the mucous membranes of the bladder. No damage to the intestines has occurred, as indicated by hemorrhage or bowel obstruction.

From the above clinical report it appears that there is a limited field for deep therapy in the treatment of tumors of the bladder and prostate. Deep therapy does not take the place of surgery, but may be used as a valuable adjunct in a certain number of preoperative and post-operative cases of malignancy. This treatment seems to be indicated in two general type of inoperable patients, first, in those cases with extensive prostatic and bladder involvement; second, in those cases with serious complications that prevent surgical interference, whether the pathology be malignant or benign.

304 Humboldt Building.

SOME EXPERIENCES WITH MENINGITIS AND DESCRIPTION OF A NEW SIGN*

T. WISTAR WHITE, M.D.

ST. LOUIS

Holt stated some years ago that not more than half of the cases of meningitis were diag-

*Read before the sixty-seventh annual meeting Missouri State Medical Association, Springfield, May 6, 7, 8, 1924.

nosed as such. If that is true of the average case, the percentage correctly diagnosed in the infant must be much lower, judging by those seen in consultation and those admitted to the St. Louis Isolation Hospital in the late stages of the disease, and this notwithstanding that we have a valuable symptom in the infant not present in the older patient, namely, the tense and bulging fontanelle.

That all types of meningitis occur in infancy is abundantly proved by cases reported. The following is a case in early life not previously reported.

H. W., infant boy, admitted to Bethesda Hospital, September 20, 1924. Mother died on the fourth day after delivery. She was one of two women delivered in the same room of a local hospital within an hour, both dying within four days of puerperal sepsis. Baby had been taken to his home where it became ill some days later. On admission, his temperature was 102.6, having frequent convulsions, retracted head, bulging fontanelle and other evidences of advanced meningitis. Lumbar puncture produced cloudy fluid containing pus and streptococci. He died the following day when fourteen days of age.

However, we are chiefly concerned with the epidemic variety on account of the probable successful outcome from the use of specific antiserum. Delay in diagnosis obviously increases the terrifically high mortality in babies largely through the tendency to develop blocking of the spinal subarachnoid space.

In 1911 the writer reported to the St. Louis Medical Society the results of experiments in tapping the lateral ventricles through the anterior fontanelle in infant cadavers, and advocated treating all infants with open fontanelles by that route as soon as the diagnosis of meningitis was made, believing that method might lessen the tendency to develop obstruction.

Since then this has been performed successfully many times but unfortunately on either late cases or those in which blocking had already occurred. In two cases the spinal fluid became sterile through the administration of serum but the obstruction was never relieved. One lived for ten months after the onset, undergoing many ventricular punctures and died of an extreme hydrocephalus. The other, after many punctures through the fontanelle, became secondarily infected and died of streptococcus meningitis.

The above is mentioned chiefly to illustrate what can be done more easily and with less danger in most cases by cistern puncture.

Since the development of the operation of cistern puncture by Ayer¹ and his co-workers² the tendency has been to reserve this procedure for complicated cases only. Since it is much more easily, quickly and accurately performed

than lumbar puncture, why not make this the method of choice in withdrawing fluid and administering serum in all cases? Especially since there is so little hope of results after blocking has occurred. With perfection of this procedure the only application of ventricular puncture would be those cases of obstruction above the cisterna magna or obliteration of that space as reported in one case by Ayer.³ According to Dandy and Blackfan,⁴ internal hydrocephalus can be produced by obstruction of the foramen of Monro or the aqueduct of Sylvius. Consequently, in blockage of these canals by meningitis, cistern puncture would not reach the fluid.

Of the patients admitted to the Isolation Hospital as meningitis cases previous to lumbar puncture, many prove to be due to the pneumococcus. In a long series on which treatment varying from the administration of urotropin to the institution of continuous drainage has been used, the outcome has been uniformly disappointing. The recent report by Smith and Casparis⁵ on the intravenous administration of gentian violet in staphylococcus septicemia recalls the use of this dye by Churchman⁶ in various infections due to gram positive organisms. Its use intravenously suggests the possibility of a beneficial effect in pneumococcus meningitis since this bacterium belongs to the gram positive group. It was used both intraspinally and intravenously in two such cases. Failure was not surprising in view of the condition of the two patients.

The first, a baby 19 months of age, was in poor condition on admission. There was some confusion in the laboratory reports and she was first treated for meningococcus meningitis with intraspinal injections of serum. Some days later on diagnosis of pneumococcus infection, she was given repeated intraspinal injections of 12 to 15 cc. of $\frac{1}{4}$ per cent solution of gentian violet but developed obstruction and died. Intravenous treatment was not successful as her veins were not large enough to enter and the fontanelle was closed.

The second case was equally unpromising. A 4-year old girl admitted December 31, died January 7. She was given gentian violet intraspinally after a delay in diagnosis and in obtaining the dye. Twelve to 15 cc. were given twice daily with an equal amount intravenously once daily. In both cases the solution for intraspinal administration was made up in normal saline to obtain a higher specific gravity to expedite diffusion.

Still more recently Young⁷ has reported astonishing results from the intravenous use of gentian violet in various infections due to

gram positive organisms and mercurochrom in those due to the gram negative group, which is encouraging to the further perfectly logical use of gentian violet in pneumococcus meningitis.

The new sign of meningitis referred to in the title is simply the observation of the fact that rigidity of the dorsal and lumbar spine appears very early in the disease. During an epidemic of meningitis at Camp Mills everyone with a headache was under suspicion. On examining patients with this disease in mind it was noted that when the patient was seated on the side of the regulation army hospital bed the rather weak springs would sag with his weight leaving the knees elevated above his hips. The position naturally assumed by one so seated is that of leaning with the elbows resting on the thighs and the body leaning slightly forward. It was observed that those suffering with meningitis would rest the forearm only on the thigh while the back would maintain a very erect soldierly carriage. This posture was the deciding point in determining the advisability of lumbar puncture in at least two cases. Both men were able to walk into the hospital, were fully conscious, complaining of headache, temperature very slightly above normal, no rigidity of neck, could rest chin on chest without pain or difficulty but had rigid spine. Lumbar puncture revealed increased fluid under pressure. In one, a few meningococci were found. In the other, there were no organisms and no cell increase but on the following day with more marked evidence of meningitis, lumbar puncture produced fluid containing meningococci. Both patients made rapid recovery on serum treatment.

This posture has been observed in a case diagnosed as epidemic encephalitis, and in a child following repeated convulsions during a respiratory infection, in both of which normal spinal fluid under pressure was obtained. It would probably be present in any condition causing increased intraspinal pressure. While not pathognomonic of meningitis it appears very early and should be an aid in early diagnosis.

Lister Building.

BIBLIOGRAPHY

1. White. Arch. Ped. 1917.
2. Wegfarth, Ayer and Cussick. Am. Jour. Med. Sci. June, 1919.
3. Ayer. J. A. M. A. Aug. 4, 1923.
4. Dandy and Blackfan. Am. Jour. Dis. Child. Dec., 1917.
5. Smith and Casparis. J. A. M. A. Dec. 29, 1923.
6. Churchman. J. A. M. A. Jan. 17, 1920.
7. Young. J. A. M. A. Jan. 17, 1924.

George E. Price and John T. Bird, Spokane, Wash. (*Journal A. M. A.*, Jan. 24, 1925), report a case of adiposis dolorosa with increased sugar tolerance and epileptiform convulsions. Marked improvement followed the administration of thyroid and pituitary substance.

TWO YEARS' PRACTICAL EXPERIENCE WITH THE QUARTZ LIGHT IN CHILDREN'S DISEASES*

JOHN ZAHORSKY, M.D.

ST. LOUIS

The object of this paper is to answer the question: What success are you having in treating certain children's diseases by means of the quartz ultraviolet ray?

For the physiological action of light therapy, especially heliotherapy, I must refer to recent textbooks and several articles published during the last few years. Briefly, the effect of the chemical rays of light is to augment the metabolic rate, stimulate cell activity and increase the cell content of the blood. The calcium and phosphorus metabolism is much enhanced and lime salts are deposited in bones and tuberculous foci. Moreover, the quartz light has a marked bactericidal effect, which property can be effectively used on superficial infections. The penetrating power of the ray is not great, but it is difficult to interpret the striking effect in rickets unless we assume a greater penetrative power than the experiments demonstrate.

During the last two years we have used the quartz light in nearly two hundred cases of various local and general diseases. The technique employed was to expose the whole body at distance of 15 inches for a varying period of time. The first treatment was never more than one minute. This was gradually increased until both anteriorly and posteriorly the body received the light for 4 or even 6 minutes. The treatment was given twice a week, but in certain local infections a short daily exposure was found to be the most efficacious. Older children usually sat on a stool and the exposure was applied first in the back and then in the front. Babies were laid on a table and the light allowed to shine upon them from above. The eyes of the patient were always protected by amber colored glasses.

Local treatment was employed on superficial infections of the skin; also in diseases of the tonsils, ears, tuberculous sinuses, and also the vagina. In some of these cases a special local applicator is necessary, as for the ears and vagina. The mucous membrane is very resistant to these light rays and no harm resulted from an exposure of one minute or longer at a distance of 1 inch, or in actual contact.

We have had no bad results from this treatment. Only a very few patients had a "burn"

*Read before the sixty-seventh annual meeting Missouri State Medical Association, Springfield, May 6, 7, 8, 1924.

of any consequence and this was promptly allayed by the application of some emollient. The rubefacient action of the light was manifested on the second or third day and was followed by a fine branny desquamation. Actual vesication occurred in three or four cases but no detrimental effect from this was observed. After a few treatments the physiological effect, (increased pigmentation of the skin) was expected, although, as in the case of sunburn, children varied greatly in the promptness with which this phenomenon appeared. I will place these cases in several groups:

Group 1. *The superficial infections.* Furunculosis, impetigo, ringworm of the scalp, acne vulgaris, erysipelas.

Our results in furunculosis have not been favorable although the irradiation of a scalp covered with many superficial boils has seemed to dry up many of the smaller pustules.

In impetigo the bactericidal effect of the ray was pronounced, but not more striking than that often obtained by chemical germicides.

I treated two cases of ringworm of the scalp by the quartz light. The light treatment very much hastened the cleaning of the scalp, the epilation and subsequent healing. It is true, germicides were combined with the light treatment.

Our most remarkable results were obtained in three cases of erysipelas. These I wish to report in detail.

Case 1. H. W., girl, 2 years old. Previous history unimportant. On August 4, 1923, the mother noticed a very small abrasion below the left knee, the result of a mosquito bite and consequent scratching. The following day considerable redness developed around this lesion and the child became irritable and restless. That evening the temperature rose to 104 deg. The family physician applied an antiseptic-pack. The fever continued high on the following day and the dermatitis spread.

On the third day of the disease the dermatitis had spread up and down, reaching to the ankle below and to the middle of the thigh above. The original lesion was insignificant. The skin showed the typical changes of erysipelas, slightly swollen, bright red skin with sharply defined edges. This inflammation spread another inch or more on the following day. The temperature ranged from 102 deg. to 104 deg. The child was exceedingly restless and took very little food. She received an alkaline fever mixture internally and a soothing lotion externally.

The treatment by the quartz light began August 7. The first day the right leg and thigh, both anteriorly, was irradiated for one minute at the distance of 15 inches. On the following day this was increased to two minutes. The time was gradually increased to four minutes. Altogether she received seven treatments.

After the third treatment the disease ceased spreading upward. Meanwhile the whole foot and the toes became swollen. The fever dropped to 99 deg. on the third day, the rash even after the first treatment became much paler. The child became comfortable. Considerable desquamation followed the light treatment.

The lower extremity seemed almost normal two weeks after the treatment commenced. The general condition was very good.

Case 2. G. H., boy, 4 weeks old. The erysipelas began with a high fever and a swelling below the left ear. Two days later the left concha and surrounding skin were red and swollen. The redness gradually advanced over the face and back. The temperature persistently remained above 104 degrees. The baby seemed extremely ill. Leucocytes 26,000.

The quartz light was not used until the sixth day of the disease, when the inflammation had advanced all over the scalp, face, chest and one-half of the abdomen. The baby was brought to the office daily in an automobile. A general treatment all over the body, the lamp at a distance of 16 inches, commenced on May 19, 1923. The exposures lasted one minute, gradually increased to three minutes. He received 12 treatments in all.

The temperature began to go down soon after the first treatment. The afternoon temperatures were as follows: May 19, 104.4; May 20, 103.4; May 23, 102.6; May 26, 102; May 29, 101; June 2, 100; June 5, 99; June 8, 98.4. The disease continued to spread until the whole integument including the feet and toes was involved. Marked desquamation followed.

The restlessness and anorexia were much improved after beginning the quartz light treatment.

Altogether the result in this case was very favorable, considering the severity of the disease and the age of the patient.

Case 3. W. M., boy, five weeks old, weighed at birth 8 pounds, artificially fed. The baby has fever for more than a week, no marked digestive disturbance. General physical examination negative, except a swelling of the lower extremities. Both legs, the thighs and scrotum are red and swollen. Midway to the umbilicus a rather distinct line separates the inflamed from the healthy skin. Temperature, 103 degrees; leucocytes 16,000. Diagnosis, erysipelas.

Treatment, quartz light, one minute in front and back. This exposure was given every other day for five treatments. After the third exposure the temperature dropped to normal and the skin condition became much better. The redness spread to the umbilicus in front and to the last dorsal vertebra posteriorly. The evening following the treatment petrolatum was applied. Two superficial abscesses formed in each half of the scrotum which needed surgical treatment. Recovery complete in two weeks.

Group 2. *Rickets and Spasmophilia.* Recent studies have emphasized the importance of sunlight in the cure of rickets. Our present practice in cases of well marked rickets is to advise the quartz light during the colder and darker months of the year, January, February, March and April. During the summer months sunlight is available even in our large cities. Our results in several cases were very good, but not nearly so striking as the effect of putting the child out on the lawn daily for several hours in the open sunlight.

In three cases of spasmophilia, the laryngospasm and general spasms disappeared after less than a dozen treatments. In all cases the internal administration of lime salts was also employed.

Group 3. *Tuberculosis.* We have treated many different forms of this disease with the quartz light. Our most striking results were found in cases of glandular tuberculosis of the

neck associated with sinuses. These were treated generally and locally. The sinuses healed in two or three weeks, an effect attainable by no other method. The remaining glands became gradually smaller. Some disappeared, others calcified after several months of treatment.

I have used the light treatment combined with orthopedic appliances in two cases of Pott's disease of the spine. In both cases the therapy was remarkably successful in that the spine seemed perfectly well after one year, with no deformity in one case and only slight deformity in the other.

Six cases of incipient pulmonary tuberculosis have been under our care during the last two years. In all of these the process has apparently come to a standstill, the nutrition has become normal and there are no pulmonary symptoms. Only the Roentgen ray still reveals an infected hilus.

Group 4. *Nontuberculosis chronic broncho-pneumonia*. We have had several cases of this kind under treatment for months. I cannot explain their persistency unless some foreign body not shown by the Roentgen ray is present, or, what is more likely, one or more bronchial glands are diseased or even purulent thus obstructing the normal lymph channels. In general the patients seemed satisfied with the treatment in that the general health improved and the patients seemed normal, although in two cases the physical signs of pulmonary consolidation are still present after several months of treatment. Two cases are reported.

Case, J. R., girl, 18 months old. Seen first in August, 1923. She had been breast fed for several months followed by a rational diet. She was in good health until June when she contracted measles followed by broncho-pneumonia. After three weeks she became much better and although the fever disappeared the distressing cough persisted.

Examination. Thin girl, skin pale. Nothing was found except that there was considerable dulness over the whole right lung. Mucous rales present everywhere and bronchovesicular breathing over right middle lobe. The temperature was normal. The Roentgen ray gave the picture of a diffuse broncho-pneumonia of the right lung. Leucocyte count, 14,000. Von Pirquet negative; no tubercle bacilli in sputum. Diagnosis, interstitial pneumonia with multiple abscesses.

In addition to dietary and hygienic measures, she received, once or twice a week, treatment with the quartz light. This was continued for seven months. During this time her general condition remained good. She gained two pounds in weight but she continued to have severe coughing paroxysms. Sometimes she expectorated a small quantity of purulent sputum. The physical signs varied. Occasionally nearly the whole lung would seem consolidated and bronchial breathing was present. This would almost clear up, when another relapse occurred. There is still a small area of bronchial breathing after seven months of treatment over the right middle lobe, but the cough has improved and the child seems well.

L. B., 7 years old, girl. She gives a history that three years ago she had whooping cough. A cough persisted after that but she did fairly well until one year ago when she had pneumonia. She has not been well since then; was treated by several physicians; she remained in the hospital for several months. She has a cough and does not gain.

Physical examination shows bronchial breathing and dulness over left base of the lung. The roentgenogram revealed shadow over this part of the lung and a large hilus shadow. Von Pirquet negative. No tubercle bacilli in the sputum.

She received biweekly treatment for nine months. The exposure was limited to one minute front and back at first. This was gradually increased to six minutes. During this time she gained six pounds in weight and the consolidated area, with periods of remission and aggravation, gradually cleared up. Diagnosis, chronic adenopathy.

I have attempted to cure chronically infected tonsils by the local application of the quartz light. This treatment has little or no effect on enlarged tonsils but does stimulate an infected tonsil to greater activity and often one succeeds in cleaning it up. After all, an infected tonsil is one which for some reason does not or can not disgorge its infected focus through one of the follicles.

Case A. P., 11 years old, thin girl, weight 56 pounds. She has always been a thin, slender girl with a poor appetite. General physical examination reveals nothing abnormal with the internal organs. Urine normal. Leucocytes 12,800. Blood coagulation three minutes. The tonsils are moderately large, the left very much congested and imbedded. Several enlarged lymph nodes in the left side of the neck. Von Pirquet negative.

Quartz ray application beginning with one minute every four days, increased to two minutes. After the second irradiation an exudate appeared on the left tonsil which persisted for several days. The throat condition improved very much and she gained two pounds in weight in one month.

In two other cases we were unsuccessful and they had to be referred to the surgeon. There is a great technical difficulty in applying the light to the tonsil, as the child will repeatedly gag and thus frustrate our efforts.

We have used the general treatment in numerous cases of bronchial adenopathy and the improvement in nutrition was often remarkable.

Group 6. *Otitis and vaginitis*. By means of a small cylindrical quartz applicator the ray may be applied within the aural meatus or the vagina. I have tried to cure a persistent otorrhea by this method. In two cases our cure seemed brilliant; in two other cases no appreciable result obtained.

In the specific vaginitis of young girls the quartz light has proven an entire failure in our hands although we tried it carefully and persistently in six cases.

Group 7. *Skin diseases—eczema, acne, impetigo, psoriasis*. We have found the quartz light valuable in stimulating the skin in per-

sistent cases of eczema. When considerable weeping is present the ray has a drying effect. Especially valuable results were obtained when impetiginous lesions were associated with eczema.

No perceptible effect was obtained in the treatment of acne vulgaris.

A brilliant temporary cure was recently obtained by a young girl suffering from a general psoriasis. The lesions completely disappeared but after three months they had a tendency to recur. She is still under our treatment.

Group 8. *Malnutrition*. There are many children, especially during the latter weeks of winter, who suffer from poor nutrition, variously diagnosed as anorexia nervosa, school anemia, simple anemia, etc. These cases are often strikingly benefited by two treatments weekly by means of the quartz light. Quite a number of cases have been under observation but are still too few in number from which to draw definite conclusions.

Altogether I regard the quartz light as a valuable addition to our therapeutic armamentarium. It is another question whether its advantages are such that it can not be replaced by the use of sunlight or the cheaper arc light. The average practitioner will probably direct his patient to be exposed to the sun in the summer time at least, and produce the same pigmentation of the skin and probably the same general effect. Heliotherapy is a very powerful therapeutic aid in the cure of all forms of tuberculosis. Rickets and spasmophilia also yield to this influence.

In the winter time, however, in our large cities, the quartz light should be accessible to the pediatrician. We are only beginning to learn what may be accomplished by the proper use of light.

536 N. Taylor Ave.

DISPLACEMENT OF UPPER EPIPHYSIS OF FEMUR TREATED BY OPEN REDUCTION

In seven cases of epiphyseal displacement of the upper end of the femur, reported by Philip D. Wilson, Boston (*Journal A. M. A.*, Nov. 29, 1924), the injury was of the type known as "slipping epiphysis." A study of these cases reveals the fact that abnormally of growth due to endocrine disturbance or to a rapid increase in height may play a part in weakening the epiphyseal junction. Trauma and mechanical factors, however, play an important part in the production of the injury. These patients were treated by open operation, and the epiphysis was replaced. Three were old, malunited cases. There were no complications, and the end-results as regards both anatomic form and function have been very satisfactory. It is urged that a more perfect standard of correction be adopted in these cases and that, when this cannot be obtained by closed methods, resort be made to the open method.

INFANTILE PARALYSIS IN ELDERLY PERSONS

A. L. Hall, Fulton, N. Y. (*Journal A. M. A.*, Nov. 29, 1924), relates the case of a man, aged 80, of good habits and previous good health, who was taken with a severe headache and some nausea, accompanied by chilliness, fever, sore throat, stiffness of the neck and upper dorsal region, difficulty in swallowing and systemic weakness. He was unable to stand. He was ailing for about three days before taking to bed. The temperature was 103.5 F.; the pulse, 116, and the respiration, 30. The patient was very nervous and apprehensive; the eyes were glassy and staring; he was unable to swallow food or liquids; there was extreme rigidity of the neck and upper dorsal spine, with marked tenderness over these regions; the throat was sore, the mucous membrane being moderately congested and slightly swollen and indicative of a relaxed state of the throat structures rather than of acute inflammatory action; there were numerous small swollen glands in the cervical region; there was muscular tremor of face and upper extremities; he sat erect in bed, owing to a sense of suffocation and a fear that he might choke to death; the patellar reflexes were diminished; the throat reflexes were not easily excited and there had been obstinate constipation for several days. For the next three days these symptoms persisted, and he could not be induced to take any food or swallow liquids. The temperature dropped slowly and on the fifth day became normal, although the pulse and respiration rates were higher than usual. Recovery was slow, the patient being confined to bed for three weeks. He has gradually improved in general strength; the tonicity of the lower extremities is increased, the patellar reflexes being now normal, but some leg weakness is evident. The throat reflexes are nearly normal, and he can easily swallow solid food; but liquids are still swallowed with some difficulty. He has never presented any evidence of organic paralysis, recent or remote, nor is there any history of previous motor impairment, and, apparently, his difficulty in swallowing and other related symptoms were due to an acute systemic infection which escaped detection. However, the symptoms suggested infantile paralysis. Hall has seen several other similar cases.

TRAUMATIC FAT NECROSIS

Two cases of fat necrosis are presented by William Barclay Parsons, New York (*Journal A. M. A.*, Nov. 29, 1924), one of the breast and one of the inguinal region, the latter because so definitely due to trauma, and the breast case because of the importance of the differential diagnosis from carcinoma; the small firm mass in the breast with the orange peel skin and slight dimpling are signs of considerable moment, suggestive of malignancy. Both patients sought relief on account of a painless lump, which at operation was found to lie in the subcutaneous fat. The first case presented a definite history of injury. The second patient, although exhibiting an area of ecchymosis, could not remember the receipt of any trauma. The source of this subcutaneous hemorrhage would seem to have been traumatic in all likelihood, as she gave no history of spontaneous hemorrhage elsewhere in the body at any time. The etiologic factor is thus assumed to be trauma in one case, and suspected trauma in the other. The duration of both these cases is very short, twelve and ten days, respectively. Barclay believes that these are as early as any of the cases that have been noted.

THE JOURNAL

OF THE

Missouri State Medical Association

FEBRUARY, 1925

EDITORIALS

AMENDMENTS TO MEDICAL LAW INTRODUCED IN GENERAL ASSEMBLY

As announced in our January issue the Committee on Health and Public Instruction with the approval of the Executive Committee, the Councilors and other officers of the Association, prepared some amendments to the medical practice law for introduction at this session of the General Assembly which, if adopted and approved by Governor Baker, will materially strengthen the medical law. Several county societies have approved these amendments and we expect unanimous approval. The bill was introduced in the House of Representatives by Dr. W. H. Bailey, representative from Perry County, and in the Senate by Dr. Guy B. Mitchell, of Taney County, Senator for the 19th District.

Members are requested to write their representatives and senators and express their approval of House Bill No. 223 and Senate Bill No. 83 and request them to vote for the adoption of the bills. In doing so it will be well to give your representatives the reasons why you think the bills should be passed. The text of the bills follows, the amendments to the law being printed in italics:

HOUSE BILL NO. 223

INTRODUCED BY MR. BAILEY

AND

SENATE BILL NO. 83

INTRODUCED BY SENATOR MITCHELL

AN ACT

To amend article 1, of chapter 65, of the Revised Statutes of Missouri, 1919, entitled, "Medicine, surgery and midwifery," by repealing section 7332, as amended by the 51st general assembly, session acts of 1921, approved April 15, 1921, found on pages 471, 472 and 473 of said acts, as amended by the 52nd general assembly, session acts of 1923, approved March 27, 1923, found on pages 253, 254 and 255 of said acts; and by repealing section 7334 of the Revised Statutes of Missouri, 1919, as amended by the 52nd general assembly, session acts of 1923, approved

March 26, 1923, and found on pages 252 and 253 of said acts; and by repealing section 7336 of the Revised Statutes of Missouri, 1919, and by enacting in lieu thereof three new sections to be known and numbered as section 7332, section 7334 and section 7336, relating to the same subject.

Be it enacted by the General Assembly of the State of Missouri, as follows:

Section 1. That section 7332 of article 1, chapter 65, of the Revised Statutes of Missouri, 1919, entitled, "Medicine, surgery and midwifery"—"providing for examination of persons desiring to practice medicine or surgery in state," as amended by the 51st general assembly, found in session acts of 1921, approved April 15, 1921, on pages 471, 472 and 473 of said acts, as amended by the 52nd general assembly, found in the session acts of 1923, approved March 27, 1923, and found on pages 253, 254 and 255 of said acts, be and the same is hereby repealed and a new section enacted in lieu thereof to be known and numbered as section 7332 relating to the same subject, so that said section when so enacted shall read as follows:

Sec. 7332. All persons desiring to practice medicine or surgery in this state, or to treat the sick or afflicted, as provided in section 7330 of this article, shall appear before state board of health at such time and place as the board may direct, and there shall be examined as to their fitness to engage in such practice. All persons appearing for examination shall make application in writing to the secretary of the said board thirty days before the meeting. They shall furnish satisfactory evidence of their preliminary qualifications, to-wit, a certificate of graduation from an accredited high school, or its equivalent, or state normal school, college, university or academy. They shall also furnish satisfactory evidence of having *attended throughout at least four terms of nine months each and of having received a diploma from some reputable medical college that enforces four years' requirements*, including two years' experience in operative and hospital work at time of graduation; provided that the time of graduation has been since March 12, 1901, and two years' requirements if the date of graduation is prior to March 12, 1901, and shall also furnish evidence of good moral character. The medical examination may be made in whole or in part in writing and shall be of elementary and practical character, but sufficiently strict to test the qualifications of the candidate as a practitioner, and shall embrace the subjects of anatomy, chemistry, physiology,

therapeutics, obstetrics, gynecology, surgery, practice of medicine, bacteriology, medical jurisprudence and hygiene, and such other branches as the state board may direct: Provided, that each applicant for license shall have two hours if necessary during which to answer the usual number of questions asked on each branch examined upon. The candidate shall be required to attain an average of seventy-five percentum of all subjects examined on, provided that he must not fall below fifty percentum on any one subject, before being granted a license: Provided, however, that the examination of any applicant in therapeutics shall be conducted by the member or members of the said board who represent the system of medicine of which said applicant has been a student. If there shall be no representative of the school or system of which the applicant has been a student, the examination in therapeutics shall be conducted by an examiner appointed for that purpose by the governor of Missouri, but all examinations other than that in therapeutics shall be conducted as heretofore provided in this article. The board of health shall issue to such persons as they shall find upon examination to possess the requisite qualifications, a license to practice medicine and surgery in accordance with the provisions of this article, and the state board of health shall not be permitted to favor any particular school or system of medicine but all applicants shall be subjected to the same examination and the same degree of proficiency shall be required of all: *Provided, that in determining the qualifications necessary for registration as a qualified physician the state board of health may, at its discretion, accept the certificate of the national board of medical examiners of the United States, chartered under the laws of the District of Columbia in lieu of and as equivalent to its own professional examination. Every applicant for a license upon the basis of such certificate shall, upon making application showing necessary qualifications, as above set out, be required to pay the same fee required of applicants to take the examination before the board. And it is further provided that the said state board of health may, under the regulations established by the board, admit without examination legally qualified practitioners of medicine who hold certificates to practice medicine in any state or territory of the United States, or the District of Columbia, with equal requirements to the state of Missouri, and that extend like privileges to legally qualified practitioners from this state upon the applicant paying a fee of twenty-five dollars (\$25.00).*

Sec. 2. That section 7334 of article 1,

chapter 65, of the Revised Statutes of Missouri, 1919, entitled, "Medicine, surgery and midwifery"—"relating to the practice of medicine and treatment of sick without license and providing a penalty therefor," as amended by the 52nd general assembly, found in session acts of 1923, approved March 26, 1923, found on pages 252 and 253 of said acts, is hereby repealed and a new section enacted in lieu thereof to be known and numbered as section 7334 relating to the same subject so that said section when so enacted shall read as follows:

Sec. 7334. Any person practicing medicine or surgery in this state, and any person attempting to treat the sick or others afflicted with bodily or mental infirmities, and any person representing or advertising himself by any means or through any medium whatsoever, or in any manner whatsoever, so as to indicate that he is authorized to or does practice medicine or surgery in this state, or that he is authorized to or does treat the sick or others afflicted with bodily or mental infirmities, without a license from the state board of health, as provided in this article, or after the revocation of such license by the state board of health as provided in this article, shall be deemed guilty of a felony and upon conviction thereof shall be imprisoned in the penitentiary by a term not exceeding two years or by a fine of not less than fifty dollars nor more than five hundred dollars, or by imprisonment in the county jail for a period of not less than thirty days nor more than one year, or by both such fine and imprisonment for each and every offense; and treating each patient shall be regarded as a separate offense. Upon receiving information that any provision of this section has been or is being violated the secretary of the state board of health shall investigate the matter and upon probable cause appearing, shall, under direction of the board, file a complaint with the prosecuting or circuit attorney in the county or city where the alleged offense has occurred. It shall be the duty of the prosecuting or circuit attorney upon request of the secretary to take charge of and conduct such prosecution. Any person filing or attempting to file as his own, a license of another or a forged affidavit of identification, shall be guilty of a felony and upon conviction thereof, shall be subjected to such fine and imprisonment as are made and provided by statutes of this state for the crime of forgery in the second degree. Said fines to be turned into the state treasury when collected: Provided, that physicians registered on or prior to March 1, 1901, shall be regarded for every purpose herein as licentiates and registered

physicians under the provisions of this article.

Sec. 3. That article 1, of chapter 65, of the Revised Statutes of Missouri, 1919, entitled, "Medicine, surgery and midwifery"—"authority of state board of health to issue or revoke licenses to practice medicine," be hereby amended by repealing all of section 7336 of said article and chapter and by re-enacting a new section in lieu thereof to be known and numbered as section 7336, relating to the same subject so that when so enacted said section shall read as follows:

Sec. 7336. The board may refuse to license individuals of bad moral character, or persons guilty of unprofessional or dishonorable conduct, and they may revoke licenses, or other rights to practice, however derived, for like causes, and in cases where the license has been granted upon false and fraudulent statements, after giving the accused an opportunity to be heard in his defense before the board as hereinafter provided. Habitual drunkenness, drug habit or excessive use of narcotics, or producing criminal abortion, or soliciting patronage by agents, *conviction for crime, and the publication, distribution or authorizing the distribution of written or printed matter which is false, misleading and deceptive*, shall be deemed unprofessional and dishonorable conduct within the meaning of this section. At least twenty days prior to the date set for any such hearing before the board for the revocation of such license, the secretary of the board shall cause written notice to be personally served upon the defendant in the manner prescribed for the serving of original writs of civil actions. Said notice shall contain an exact statement of the charges and the date and place set for the hearing before the board. If the party thus notified fails to appear, either in person or by counsel, at the time and place designated in said notice, the board shall, after receiving satisfactory evidence of the truth of the charges and the proper issuance and service of notice, revoke said license. If the licentiate appear either in person or by counsel, the board shall proceed with the hearing as herein provided. The board may receive and consider depositions and oral statements and shall cause stenographic reports of the oral testimony to be taken and transcribed, which, together with all other papers pertaining thereto, shall be preserved for two years. If a majority of the board are satisfied that the licentiate is guilty of any of the offenses charged, the license shall be revoked for such period of time as may be agreed upon. Any person whose license has been or shall be revoked by the board shall have the right to have the pro-

ceedings of said board revoking his license and all the evidence therein reviewed, on a writ of certiorari, by the circuit court of the county in which said board held its session when said license was revoked. Said writ shall issue upon the petition of the person whose license shall have been revoked to said court or to the clerk thereof in vacation at any time within ninety days after such revocation, and shall command the said board and the secretary thereof to certify to said court the record and proceedings of said board, and a complete transcript thereof, and of all the evidence therein pertaining to the revocation of said license. The petitioner for the writ of certiorari, shall set forth the rights of the petitioner and the injuries complained of by him and shall be certified by him. If the proceedings of the board shall be sustained or upheld by the circuit court, its orders, decisions or judgments revoking said license shall remain and continue in full force and effect. And any such license so revoked by the board, shall, pending said review on certiorari, stand revoked and so remain until the proceedings of the board relating thereto shall be quashed or otherwise annulled by the circuit court on said writ of certiorari. Testimony may be taken by deposition to be used in evidence on the trial of such charges before the board in the same manner and under the same rules and practice as is now provided for the taking of depositions in civil cases.

HEALTH PROGRAM OF THE STATE DEPARTMENT OF PUBLIC SCHOOLS

The State Department of Public Schools has adopted a minimum program of health work which it is seeking to promote in all the schools of the state. It has, however, a very inadequate appropriation and personnel to carry on the work in a state as large as Missouri. It should have the co-operation of all those interested in the public's welfare.

The first item in this program is the teaching to all children in the public schools the common laws of health with at least one period of hygiene every week from the first grade through to the twelfth.

The physical examination of all children at the time of their entrance to school and as often thereafter as possible by competent physicians is recommended. Through operation, where necessary, and through corrective gymnastics and proper nutrition, such physical defects as may be corrected are to be overcome.

The State Department is trying to standardize athletics over the state and is offering 10,000 medals to children who pass the standard ath-

letic test. These medals are being paid for by the *St. Louis Globe Democrat*. The standard is one agreed upon by the leading physical educators of the country as a reasonable accomplishment which every boy and girl should be able to attain. In some eastern and western cities already practically every boy and girl above the sixth grade has passed these tests.

The state is also offering a State "M" on a basis of 1000 points of which the first 100 points must be health and the absence of physical defects. The second 100 points is on good posture, the third 100 is won by scholarship above 80 and the fourth 100 points is on sportsmanship. Other points may be won by learning to swim, by becoming a second class boy or girl scout or camp-fire girl, by leadership in student activities and by excellence in various forms of athletics.

This gives a motive for physical examinations which comes from the student himself and also an incentive to overcome the defects which may be discovered. Wherever this has been presented to high schools, there has been much enthusiasm on the part of students in regard to this letter.

Mr. Wm. Volker, Kansas City, is offering a prize of \$1000 to the high school in which the largest percentage of the students win.

Physicians are urged to take an interest in this matter in their own communities, to call up the superintendent and see if the school is entering the competition and arouse the interest of Rotary and Kiwanis Clubs as they have opportunity, in the program.

NEWS NOTES

Dr. John C. Morfit, St. Louis, has removed his offices from the University Club Building to 940 Missouri Building.

Dr. Ed. E. James, of Joplin, is suffering from a fractured hip received while playing volley ball at the Joplin Y. M. C. A.

A number of physicians in Joplin are getting ready to move into the new Joplin National Building, a nine story structure which will be completed in February.

Alumni New York Skin and Cancer Hospital are requested to send their present professional office address to the secretary of the reorganized Alumni Association, Dr. Herman Goodman, 15 Central Park West, New York City.

Dr. Herman E. Pearse, Kansas City, was a guest of the Ray County Medical Society at its meeting in Richmond, December 10, 1924, and delivered an illustrated lecture on "Fracture of the Femur."

Dr. George Gellhorn, St. Louis, delivered an address on "What the Practitioner Should Know of Radium in Gynecology," before the Lee County (Iowa) Medical Society, at Fort Madison, December 18.

The new Freeman Memorial Hospital at Joplin, which has been under construction during the past year, will be formerly opened March 1. The Freeman Hospital is an excellent new building, modernly equipped and will care for fifty patients.

The next meeting of the State Board of Health for the examination of applicants to practice medicine will be held in the Jefferson Hotel at St. Louis, February 24, 25, 26. The practical examination will be held at the City Hospital, St. Louis, on February 27.

St. Luke's Hospital at Kansas City has established a clinic in connection with the hospital work to be conducted under the supervision of the medical staff. The funds for the clinic were donated by Mrs. Woodstock in memory of her husband, S. E. Woodstock.

At a meeting of the visiting staff of the Noyes Hospital, St. Joseph, held on January 6, the following officers were elected for the year 1925: Dr. Daniel Morton, Chairman and Chief of Staff; Dr. C. A. Good, vice-chairman; Dr. E. C. Ambrose, secretary-treasurer; Dr. E. A. Gummig, recorder.

The Commission for the distribution of the Prize for Cancer Study founded by Doctor Sofie A. Nordoff-Jung, in agreement with the Foundress, has resolved to distribute the prize from now on only every two years to the double amount of the sum allotted heretofore, that is one thousand dollars. The next prize will reach distribution in 1926.

The St. Louis Medical Society was the recipient of a gift of \$50,000 donated by Mrs. Sarah L. G. Wilson, of St. Louis, in January. The money is intended principally for the benefit of the medical library which is maintained as a part of the society's activities and as a memorial to her two brothers, Drs. F. A. Glasgow and W. C. Glasgow. The society has been endeavoring to complete the collection of funds, approximating \$300,000, to erect a building upon ground purchased a year or more ago but recently voted to utilize the fund al-

ready collected, about \$160,000, in the erection of the library building and offices leaving the construction of the auditorium until such time as the necessary funds for this purpose shall be collected. It is expected that this amount will be obtained during the present year. The donation of \$10,000 by Dr. and Mrs. F. E. Woodruff materially aids in this prospect.

Dr. A. R. McComas, Surgeon, and Dr. R. R. Robinson, Hallsville, invited the members of the Boone County Medical Society to be their guests for a hunting party near Sturgeon on November 20, 1924. Twenty members were in attendance and the mortality report was high. As a result it was voted the best game dinner of the season.

The *Modern Hospital* announces the winners of the essay contest as follows: Mr. Edward A. Fitzpatrick, dean of the graduate college and educational director of the hospital college of Marquette University, Milwaukee, Wis., received first prize. Second and third prizes went to Dr. Lucius R. Wilson, assistant superintendent, Barnes Hospital, St. Louis, and to Dr. D. L. Richardson, superintendent, Providence City Hospital, Providence, R. I., respectively.

The American Urological Association, the largest organization of urologists in this country, will hold its annual meeting in St. Louis, May 21, 22, 23, 1925. Dr. John R. Caulk, of St. Louis, is chairman of the committee of arrangements. He will be assisted by Drs. Bransford Lewis, Wm. M. Robertson, C. E. Burford, H. McClure Young. Hotel Chase will be headquarters for the meeting. Scientific programs will be conducted during the afternoons, the mornings being devoted to clinics and work in the various hospitals. On Thursday night, May 21, there will be a smoker for the entertainment of the members and Friday night, May 22, will be devoted to the annual banquet. It is expected that about 200 urologists will attend the meeting. Dr. Herman L. Kretschmer, of Chicago, is president; Dr. Clarence O'Crowley, of Newark, New Jersey, president elect; Dr. H. G. Hamer, Indianapolis, Ind., is secretary.

The Rockefeller Institute for Medical Research has announced the release of the drug known as tryparsamide for use in the treatment of human and animal trypanosomiasis (African sleeping sickness and *mal de caderas*) and selected cases of syphilis of the central nervous system. This action is based on results reported from clinical investigations which have been in progress for several years. The drug

will be manufactured by the Powers-Weightman-Rosengarten Co. of Philadelphia, and will become available through the regular trade channels about January 1, 1925. In releasing the drug for the benefit of the public, the Rockefeller Institute desires it to be known that the Institute does not share in any way in profits that may be derived from the sale of the drug and that, with the cordial cooperation of the manufacturers, provision has been made for the maintenance of a schedule of prices on as low a basis as possible.

It is to be remembered that there are certain dangers connected with the use of this drug, particularly temporary blindness. It would be well for the general practitioner to be thoroughly conversant with these untoward effects before attempting the general use of this remedy.

Examinations of candidates for entrance into the Regular Corps of the U. S. Public Health Service will be held at the following named places on the dates specified:

At Washington, D. C., March 2, 1925.

At Chicago, Ill., March 2, 1925.

At New Orleans, La., March 2, 1925.

At San Francisco, Cal., March 2, 1925.

Candidates must be not less than twenty-three nor more than thirty-two years of age, and they must have been graduated in medicine at some reputable medical college, and have had one year's hospital experience or two years' professional practice. They must pass satisfactorily, oral, written and clinical tests before a board of medical officers and undergo a physical examination.

Successful candidates will be recommended for appointment by the President with the advice and consent of the Senate.

Requests for information or permission to take this examination should be addressed to the Surgeon General, U. S. Public Health Service, Washington, D. C.

The following have been accepted for New and Nonofficial Remedies:

Abbott Laboratories: Tablets Benzyl Fumarate Abbott.

Gilliland Laboratories: Diphtheria Toxin Antitoxin Mixture 0.1 L +.

Hynson, Westcott and Dunning: Sealed Tubes Mercurochrome—220 Soluble 0.5 Gm.

Lederle Antitoxin Laboratories: Intracutaneous Tuberculin for the Mantoux Test.

Lehn and Fink: Corpus Luteum—L. and F. Desiccated.

Mallinckrodt Chemical Works: Mallinckrodt Tetrabromphenolphthalein Sodium Salt.

H. K. Mulford Co.: Neorobin Vacuum Sealed Tubes Neorobin.

New York Quinine and Chemical Works: Euquine—N.Y.Q.

E. R. Squibb and Sons: Bacillus Bulgaricus-Squibb.

Nonproprietary article: Tetrabromphenolphthalein Sodium.

A new medical journal has been launched by physicians in Springfield with the title "Springfield, Mo., Clinical Bulletin." The first number appeared in January and it will be published quarterly. "The mission of the bulletin" it is announced "will be to furnish the profession tributary to Springfield, Mo., and its several hospitals a better knowledge of these institutions and to bring them into closer cooperation with our local profession, numbering more than one hundred physicians, actively engaged in the practice of medicine, surgery and its various specialties." The editors expect to publish many of the papers read before the Greene County Medical Society, few of which, it is said, are submitted to other publications. There is no doubt that the physicians in Springfield and in other parts of the state contribute many valuable papers at society meetings but fail to publish them. We are glad, therefore, to see this new journal and hope it will be the means of bringing a great deal of the good work done in and around Springfield to the attention of the profession tributary to the Queen City of the Ozarks. Dr. Paul F. Cole is managing editor and is assisted by a staff of eighteen associate editors.

The Inter-State Post Graduate Assembly clinic tour of American Physicians to Canada, British Isles and France, 1925, will include all the different branches and specialties of medical science. Tour starts from Chicago by special trains, May 17, 1925. Physicians living in territory where it will be more convenient to go direct to Toronto will be provided with direct transportation to that city. May 18, 19, Toronto. May 20, trip through the Thousand Islands and the St. Lawrence Rapids. May 21-22, Montreal. May 23, early morning sail for Liverpool arriving in that city May 31. Ship program: An intensive professional trans-Atlantic program for the benefit of the physicians who are taking advantage of the tour will take place on board ship and will be contributed to by some of America's most distinguished physicians and surgeons. June 1-7, London. June 8-10, Liverpool, Manchester, Leeds. June 11-12, Dublin. June 13-15, Belfast. June 16-17, Glasgow. June 18-19, Edinburgh. June 20, Newcastle and University of Durham. June 21-27, Paris. Prices: Chicago to Chicago, with first-class, high grade hotels and cabin ocean passages \$990; with first-class medium grade hotels and cabin ocean

passages \$910; with moderate priced hotels and third-class ocean passages \$750. Montreal to Montreal or New York, with first-class, high grade hotels and cabin ocean passages \$880; with first-class, medium grade hotels and cabin ocean passages \$800; with moderate priced hotels and third-class ocean passages \$640. The last classification is offered to doctors and medical students who are desirous of having the chance to avail themselves of the wonderful clinic opportunities of the tour. As this Association is purely an educational institution and is working for the medical profession as a whole the board of trustees decided at its annual meeting that this class should be included. For further information write Dr. William B. Peck, Freeport, Illinois. Officers of the tour: President, Dr. Charles H. Mayo, Rochester, Minnesota; chairman of the Orientation Committee, Dr. Addison C. Page, Des Moines, Iowa; director of the tour, Dr. William B. Peck, Freeport, Illinois; secretary, Dr. Edwin Henes, Jr., Milwaukee, Wisconsin.

WOMAN'S AUXILIARY

A request from Dr. Herman E. Pearse, Chairman of the Committee on Health and Public Instruction of the Missouri State Medical Association, that the Woman's Auxiliary urge its members to solicit the aid of their senators and representatives to obtain an adequate appropriation (approximately \$100,000) for public health work, met with hearty cooperation by the women. A letter was immediately sent out to county units of the organization by Mrs. G. H. Hoxie, of Kansas City, State President, requesting them to have their members communicate with their senators and representatives and impress upon them the dire need of an ample appropriation from the total state health department fund for county co-operation health work. In addition to this action the assistance of the president of the Federated Clubs of Missouri, Mrs. Henry N. Ess, of Kansas City, was secured to the extent that the same letter was sent to four thousand club women of the state over her signature. The legislators have been and are now hearing from these women on this important question.

The presidents of the following county medical societies have recently appointed temporary chairmen to organize a Woman's Auxiliary: Gentry County, Mrs. W. T. Martin, Albany; Boone County, Mrs. W. P. Dysart, Columbia; Montgomery County, Mrs. E. W. Tinsley, Montgomery City; Ste. Genevieve County, Mrs. J. C. Clapsaddle, Ste. Genevieve; Ralls County, Mary Downing Wood, New London; Putnam County, Mrs. C. P. Vores, Unionville; Mercer County, Mrs. J. C. Donahue, Mercer.

BUCHANAN COUNTY AUXILIARY

A meeting of Buchanan County Woman's Auxiliary was held at St. Joseph, in January, for the purpose of electing officers for 1925 and resulted as follows: President, Mrs. A. B. McGlothlan; 1st vice-president, Mrs. Caryl Potter; 2d vice-president, Mrs. W. R. Moore; 3d vice-president, Mrs. W. C. Myers; 4th vice-president, Mrs. Frederick Eliscu; recording secretary, Mrs. Lloyd Thompson; corresponding secretary, Mrs. W. J. McGill; treasurer, Mrs. J. W. Bell; parliamentarian, Mrs. M. S. Gray.

The following committees were appointed: Education, Mrs. Perry Fulkerson; legislation, Mrs. H. S. Conrad; finance, Mrs. J. F. Owens.

The question of a \$100,000 budget for county co-operative health work was discussed and the members were instructed to communicate with their senators and representatives entreating them to give this movement their favorable consideration.

MRS. A. B. MCGLOTHLAN, President.

GREENE COUNTY AUXILIARY

At a meeting of Green County Woman's Auxiliary held recently it was decided to inform the Greene County Health Association and the Parent-Teachers Association of the organization of the Woman's Auxiliary and its willingness to assist them in their public health program.

The report of the state executive board meeting at St. Louis was read by Mrs. Jos. W. Love, and was discussed by the members.

It was decided to give a bridge after the holidays, the proceeds to be contributed to the sinking fund of the state organization to finance future needs.

MRS. C. B. ELKINS, President.

LAFAYETTE COUNTY AUXILIARY

The Woman's Auxiliary of Lafayette County was organized at Lexington, Tuesday, January 13, 1925. The state president, Mrs. G. H. Hoxie, Kansas City, was present and outlined the purposes of the organization and Dr. A. J. Chalkley, president of Lafayette County Medical Society, expressed the good wishes of his society for the new undertaking.

The following officers were elected: President, Mrs. C. T. Ryland, Lexington; 1st vice-president, Mrs. R. B. Watts, Wellington; 2d vice-president, Mrs. D. C. Davis, Higginsville; 3d vice-president, Mrs. R. C. Schooley, Odessa; secretary, Mrs. A. J. Chalkley, Lexington; treasurer, Mrs. Lewis Carthrae, Jr., Corder.

MRS. A. J. CHALKLEY, Secretary.

SCOTT COUNTY AUXILIARY

Two meetings of Scott County Woman's Auxiliary have been held since its organization. The attendance each time has been small but we feel that this is mostly due to the condition of country roads at this time of the year. The meetings are held in conjunction with those of Scott County Medical Society and we find this an ideal arrangement. The next meeting is to be held at Oran and the secretary has been instructed to invite all the eligible women in the county to attend.

MRS. W. H. WESCOAT, Secretary.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, FOR 1925

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Camden County Medical Society, December 29, 1924.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

One Hundred and Seventh Meeting, November 10, 1924

1. EXHIBITION OF CASES.

A. A CASE OF DOUBLE MASTOIDITIS

IN A YOUNG INFANT.—By DR. MCKIM MARRIOTT.

This patient was admitted to the hospital at the age of 2 months, with the complaint of vomiting, diarrhea and abdominal distention. The baby had been fed fairly well. On admission was much undernourished and very fretful. There was a slight watery discharge from the nose and considerable mucopus in the rhinopharynx. Both ear drums were red but not bulging. There were a few rales in the chest and the abdomen was very distended. Nothing else of importance in physical examination. The child ran an irregular temperature and this continued even though both ears were opened and discharged freely. Almost all feedings were vomited. Weight was maintained by repeated injections of glucose and saline. No good cause for the temperature could be found outside of the nose, throat and ears. There were none of the classical signs of mastoid involvement but there was a slight bulging of the posterior wall of the canal on each side. A double mastoid operation and an adenoidectomy was performed. Pus was found in both mastoids. There was almost immediate improvement in the baby's condition. The abdominal distention has now disappeared, vomiting has ceased and the child is gaining weight rapidly. This case illustrates very well the constitutional symptoms of mastoid involvement. The local signs of such involvement are absent in infants. A diagnosis has to be made by the fact that the temperature remains up after the opening of the ears, that the posterior wall of the canal sags and that general symptoms of infection are present unaccounted for elsewhere.

B. A CASE OF MASTOIDITIS WITH HEMORRHAGIC NEPHRITIS IN AN INFANT.—By DR. MCKIM MARRIOTT.

The infant was admitted to the hospital at the age of 10½ months with the complaint of failure to gain, pallor and bloody urine. Child was poorly nourished and very pale. Had a slight rhinitis, both ear drums were red and were incised. Child failed to do well. The temperature was irregular and the urine showed continuously albumin, R.B.C. and granular and hyalin casts. The ears were opened repeatedly and good drainage apparently obtained, but with little effect on the general symptoms. The signs in the mastoid were similar to those described in the preceding case. Mastoidectomy was performed and following this the temperature fell to normal. The urine cleared and the infant is now in excellent health. This case also illustrates the difficulties as well as the importance of diagnosing mastoid diseases in young infants.

C. A CASE FOR DIAGNOSIS.—By DR. MCKIM MARRIOTT.

Patient, a white male child, six years of age. Admitted with complaint of fever of four days' duration, pain referred to the upper portion of the abdomen.

General physical examination revealed very slight general glandular enlargement. Spleen enlarged and hard, extended about 1 inch below the costal margin. White count ranged between 6,000 and 8,000. Differential normal. Complement fixation for tuberculosis was positive, but tuberculin skin tests were negative. Wassermann negative. Urine negative. X-ray of chest revealed dense circular shadow about the size of silver dollar continuous with the shadow of the great vessels and extending up towards the apex of the right lung. Under the fluoroscope the mass was seen to be nonpulsating and on lateral view was located anteriorly in the chest.

The temperature fell to normal at the end of three days and the boy had no further symptoms except

occasional profuse general perspiration. There were no symptoms directly referable to the mediastinal tumor. Boy was discharged from the hospital and remained free from symptoms for about five weeks, when there was a return of fever and abdominal pain and profuse perspiration. Patient was readmitted and ran the same course as previously. On admission there was, however, a change in the physical signs. There was definite dullness and diminished breath sounds at the apex of the right lung. An X-ray showed a dense wedge shaped shadow involving the whole upper portion of the right lung. The physical signs and extensive shadow disappeared at the end of three days and a subsequent X-ray showed only the same rounded shadow seen on the first admission. The temperature fell to normal at the end of four days and the patient has been free from symptoms since. On the first admission to the hospital patient received one deep X-ray treatment. This caused no change of any kind either in symptoms or in the size of the chest shadow.

There are features in this case which suggest Hodgkin's Disease. The attacks of fever are suggestive of the Pel-Epstein type. The shadow, however, is higher in the chest than is usually seen in the case of bronchial glands. Furthermore, deep X-ray therapy has caused no change in the size of the shadow. There is no conclusive evidence that the condition is due to tuberculosis. A dermoid cyst of the mediastinum or a lymphoma must be considered as possible diagnoses. An abscess is possible but the persistently low white count is against this.

DISCUSSION

DR. A. E. STRAUSS: This case presents the characteristic findings in that type of Hodgkins Disease described by Pel and Epstein, occurring in young individuals, with intermittent fever and mediastinal glands. As the picture is presented on the X-ray, no differential diagnosis is possible. The picture I believe, simulates more, this particular type of Hodgkins Disease than any other of the possibilities mentioned.

Thoracic aneurisms have been described in young individuals, and must be considered in the differential diagnosis. Such aneurisms are usually of infectious, not leucic, origin. The mediastinum being clear in the oblique view, and the absence of other confirmatory findings make this latter diagnosis improbable.

DR. JACOB J. SINGER: The first impression one would get from a study of this case was of a mediastinal lymph gland, possibly Hodgkin's Disease. The use of massive X-ray in lung conditions occasionally leads to abscess formation. When the boy returned four weeks after the original X-ray treatment, he had signs of pneumonia in the X-ray picture. It is possible that at that time, or even now, that this mass has softened up and the abscess could have given him fever. It seems to be a kind of disappearing tumor. Those conditions occur sometimes in such cases largely after X-ray. One symptom in this case which I saw that led me strongly to suspect the possibility of an abscess is the excessive perspiration. I do not know of any condition that would give this condition other than pus.

DR. TALLERMAN: I agree with Dr. Strauss in thinking that this might well be the Pel-Epstein type of Hodgkin's Disease. One symptom of this is a rise in temperature for a few days followed by an afebrile period. When the temperature rises the glands swell up and when the temperature falls they decrease in size. It is often also associated with an infection of the retroperitoneal glands. On this basis one might explain the disappearance of the X-ray shadow coincident with the fall in temperature although I realize that the shadow in that particular

picture, hardly looks glandular in character. A swelling of the retroperitoneal glands at times might have accounted for the abdominal pains the boy complained of.

D. A CASE OF ALBUMINURIC RETINITIS.—By DR. A. D. CARR.

A colored porter, 34 years old, began to have severe frontal headache in August, 1924. This increased in severity and was accompanied by pain in the left eye and increasing dimness in vision. He had had seven convulsions. There was a history of chance 20 years ago.

The patient was first seen here two months after the onset of the headache with the foregoing history. On examination the heart was moderately enlarged but no murmurs noted. The peripheral arteries were thickened and tortuous. Urine Sp. Gv. 1.005 to 1.019, usually 1.012; moderate amount of albumin and many hyalin and granular casts with a few leucocytes and red corpuscles; phthalein excretion 30 per cent in 2 hours; N.P.N. 28 mgm. Wassermann 3 + on the blood, negative on the spinal fluid. The blood pressure ranged from 165 to 210 systolic and from 128 to 155 diastolic. The rest of the examination was essentially negative with the exception of the ophthalmoscopic examination, which showed the following:

Visual fields could not be obtained as only large objects could be distinguished. R. and L. nerve heads pale, dull and slightly swollen. The vessels are extremely tortuous and the veins are engorged. Their cavity is greater than normal. The disc margins are obliterated and merged into the surrounding retina. The fundus shows atrophic changes with edema. The retina is grayish with a loss of practically all normal color. There are scattered patches of exudate varying from the large, flat type, irregular in outline to the typical fanshaped kind. Numerous small hemorrhages are scattered here and there. The same condition of the vessels is noted here as in the discs. Media are clear.

E. VOMITING OF PREGNANCY.—By

DR. WM. T. DIECKMANN.

E. H., was admitted on 10/28/24, on account of incessant vomiting for a period of two weeks and the possibility of a need for induction of premature labor. She was gravida VI, Para V. Last period 3/17/24. Vomiting of from 1 to 3 weeks duration occurred with each previous pregnancy. Since May she has had intermittent periods of severe vomiting, and has been incapacitated most of the time since June. She has had corpora lutea injections, morphia, chloral hydrate, bromides, and rectal feedings, the latter not being well retained.

Examination: T.P.R., 36.4, 122, 24. Patient looks sick. Gagging and vomiting bile-stained fluid. Skin very dry and inelastic. No jaundice. Gestation about 32 weeks. Fetus active.

Urine: About 202 c.c. Sp. Gr. of 1.022, strongly positive nitroprusside and FeCl₃ tests, many hyaline and finely granular casts, numerous epithelial cells. Bile was strongly positive.

Blood: CO₂, 45.5. N.P.N., 26. Chlorides, 466. Sugar, 71. Phenols, 2.93.

During the night the vomitus was of the coffee-ground type. The patient was put on our routine treatment for a moderately severe case which comprises: Intravenous glucose, 20 per cent, 1000-2000 c.c. in twenty-four hours, with addition of normal saline given subcutaneously to bring fluid intake to 4000 c.c. Only cracked ice by mouth. Luminal-Sodium .096 "H," q.4h.

Seventeen hours after admission urine showed only faintly positive nitroprusside and negative FeCl₃ tests. Since she was excreting 10-15 gm. sugar in urine 20 units of insulin were given twenty-four

hours after admission. Thirty-six hours after admission the nasal tube was passed and hourly injections of 10 per cent Karo and Dryco given for two days. The initial amount was 100 c.c. which was gradually increased to 300 c.c. After forty hours the patient was well under the influence of luminal and the interval was changed to six hours. Seventy-two hours after admission dry diet was started and gradually increased to regular diet.

Under treatment the urinary output ranged from 1000-1500 c.c., the CO₂ rose rapidly to 66.4 per cent and remained high, the chlorides returned to normal, and the blood sugar ranged from 114 to 171 during intensive carbohydrate administration.

During a period of forty hours after admission the patient did not vomit. Phenoltetrachlorophthalein test (Rosenthal method) on 10/31/24 showed 14-12.4 per cent, which signifies marked impairment. P.S.P. on 11/3/24 showed only 10 per cent due probably to low urine output. On 11/4/24, output was 40 per cent in four hours. On 10/31/24 weight was 126 lbs.; this has increased daily and today, two weeks after admission, it is 134½. On 11/8/24 the liver function test showed 8-0-0 i. e. normal.

Patient was up one week after admission.

DISCUSSION

DR. O. H. SCHWARZ: This case illustrates very clearly the marked value of the administration of glucose intravenously in cases of vomiting of pregnancy. To make this glucose administration more effective, the use of insulin has been suggested in proper amounts along with the administration of the glucose. We have not as yet found it necessary to use insulin to get these patients free of acetone bodies in the urine. By giving glucose in considerable amounts, with much of it spilling over into the urine, we are able to get the urine free of acetone within twenty-four hours.

Why vomiting of pregnancy should occur particularly between the sixth and twelfth weeks of gestation it is difficult to say. So far as I know, no exact opinion has been given as to its cause. It is interesting, however, to mention that during the period in which this vomiting most frequently occurs, namely, from the sixth to the twelfth week, is the time that the placental circulation is being established, at six weeks there being very few blood vessels found in the villi, and they are fairly well developed about the twelfth week. The early fetus as well as the placenta is rich in glycogen and the decidua is also plentiful in glycogen. It would seem plausible, therefore, that as a result of this marked demand for glycogen in these tissues, that the liver and muscles are called upon to furnish this abundantly from their store.

This vomiting in most instances, is a morning affair, occurring usually after a period of considerable starvation. Starvation itself may not be a factor in vomiting but in the pregnant woman who is a markedly changed individual, starvation, plus an increased demand for carbohydrates, may be a factor in the production of vomiting. Usually after the patient has been subjected to three or four days of glucose therapy, either through the veins or the nasal tube, by the third day she usually is able to retain a dry carbohydrate diet without any difficulty.

In former years considerable significance was placed upon the ammonia coefficient, an ammonia coefficient of 10 or above indicating the necessity of a therapeutic abortion. Since we have been handling our cases in the manner described by Dr. Dieckmann we have not used the ammonia coefficient as an indication of the severity of the case. In our series several high ammonia coefficients were disregarded, with an ultimate return to normal and excellent recovery of the patient. Other observers, namely Watson and Harding, fail to attach any great significance in prognosis to the ammonia coefficient.

F. A CASE OF GANGRENE OF THE FOOT.—By DR. C. WHITNEY.

Patient admitted to Obstetrical Ward four days ago with complaint of "sore foot" following a miscarriage. Past history negative except for an attack of chorea at the age of ten years. Has had two normal, full term pregnancies, followed by five miscarriages, each of which occurred at about five months and each followed by a curettage and an uneventful recovery. The last miscarriage occurred spontaneously one month ago and was preceded by a week of chills and fever of undetermined origin.

At the time of the miscarriage there was no internal examination. Soon afterward the patient noticed a gradually increasing soreness and pain in the right thigh and calf accompanied by some swelling. Two days after the miscarriage patient was curetted. The pain in the leg continued, a tingling sensation developed in right foot and later numbness. Two weeks ago it began to discolor. Chills continued till two days before admission to the hospital, at which time they ceased. Fever has been continuous.

There is no history of any similar previous attack. An injury to the right leg causing an extensive bruise below the knee occurred in July when the patient fell and the leg has been moderately sore since.

Physical examination is essentially negative except for a rather faint presystolic murmur at mitral area, ending in sharp first sound. No thrill. Pelvic examination negative. Right leg and thigh are larger than left and feel distinctly warmer. Faint pulsation in right femoral vessel; strong pulsation in both anterior and posterior tibials on right. The toes of the right foot are pale and cold, and a line of demarcation of the gangrenous area is forming midway between the toes and the ankle. Above this the tissues are somewhat hyperemic.

Blood culture negative; temperature constantly 38 degrees C. or above; W.B.C. 21,800; urine negative; blood chemistry negative.

DISCUSSION

DR. BARNEY BROOKS: This patient was admitted to the hospital four days ago at which time there was discoloration of the distal portion of the foot and complete absence of pulsation in the arteries of the foot and popliteal space. The femoral pulse was barely perceptible. The condition was clearly that of arterial obstruction with impending gangrene. We were interested in the determination of the temperature changes in the tissues in response to the application and removal of a tourniquet. It was found that the tissues of the toes and the distal portion of the foot showed no fluctuation in temperature when a tourniquet was applied to the thigh or when it was removed. The tissues of the proximal portion of the foot, however, showed the characteristic temperature changes of arterial obstruction. Subsequent to this preliminary examination the line of demarcation has occurred at exactly the level indicated by the results of the tests applied. Furthermore, repeated examinations of the tissue temperature changes in response to the application and removal of a tourniquet have shown a marked improvement in the circulation proximal to the gangrenous tissues. This fact is an indication for delay of amputation in gangrene due to sudden arterial obstruction. The rapidity with which the collateral circulation has developed, together with the fact that there was a marked diminution of the pulsation in the proximal portion in the femoral artery indicate that the arterial obstruction occurred in the common iliac artery.

DR. O. H. SCHWARZ: Gangrene such as is illustrated by this case is seen very rarely by the obstetrician. This is the first case of this kind that we have seen at Barnes Hospital. On questioning several obstetricians about this lesion I found that they

have never seen a single case. Among these was Dr. Henry Schwarz, who has had an obstetrical experience of forty-five years.

In the recent literature Stein of New York reports two cases of his own, and collects some seventy-three cases from the literature. He includes in this paper abstracts concerning each case. Of these cases only four followed termination of a pregnancy in the first half of gestation. An additional case has been reported by Knipe. So this appears to be only the sixth case following an abortion.

These lesions usually accompany cases that have been definitely infected. When one considers the incidence of puerperal infection and the frequency of such resulting lesions as pelvic cellulitis and thrombophlebitis, one wonders why this condition should not occur more frequently.

Dr. Brooks has described the various possibilities in which such a lesion as this may occur. In the series reported by Stein there was about 50 per cent mortality in the cases. This may be due partially to an illtimed amputation perhaps just as much as to the fact that the patients were definitely infected. Waiting until the collateral circulation is well established, which can be determined readily by the method described by Dr. Brooks, may be a factor in procuring a better prognosis in these cases.

DR. A. E. STRAUSS: A question which in my mind should be considered in this case, is the significance of the signs of mitral stenosis. Certainly abortion was a coincidence in this patient, and she well may have had an embolism from the heart.

Peripheral emboli in mitral stenosis are not unusual, and the signs described in this case especially the presystolic apical murmur are characteristic of this heart lesion.

DR. E. P. LEHMAN: I should like to add a somewhat similar case that we had at the City Hospital about a year and a half ago. This patient had had a septic abortion with proved septicemia. She developed gangrene of the foot and lower leg. She did well with an amputation delayed until the line of demarcation became clear.

2. LATERAL POSITION IN ROENTGENOGRAPHY IN THE STUDY OF THE CHEST—By DR. J. J. SINGER.

In the study of several thousand roentgen plates of the chest many observations and impressions lead me to believe that often erroneous interpretations are made. There is, however, a rather increasingly large number of plates, when taken in the usual posterior-anterior positions, that require a more careful study before one can obtain a true picture. Stereoscopic plates have been accepted by most roentgenologists as the only true method used, but I am convinced that even a truer picture of the condition can be had by taking single plates with the patient in various positions.

The subject to be discussed is the value of lateral position. We have elaborated the technic of this position by introducing air into the pleural cavity especially when some fluid is present. A large pocket of air when seen in the upright position will give one a picture of the lower part of the lung, its contour, and also its mobility. The fluid below the air pocket will of course mask the lower part of the chest when in this position. When viewed laterally this air pocket will map out axillary portions of the pleural cavity and will show the contour of any mass or adhesions that may be present, and also the diaphragm can be seen at the costal phrenic angle. It will be noted when the patient is turned that one can see the mediastinal portion of the cavity and its character. By referring to the plates one can usually see that the dense shadow seen can be evaluated and a true interpretation obtained by a relatively simple procedure.

In cases in which fluid is found in the pleural cavity it is possible by aspirating the fluid and replacing the same with air to see the lung within. In several cases of lung abscess with fluid in the lung it was noted by changing patients into different positions that the lateral position is the most definite diagnostic procedure.

CONCLUSIONS

(1) The lateral position helps to make the particular lung picture clearer and gives a greater contrast to the upright position.

(2) Diagnostic pneumothorax, especially in cases of fluid in the chest enables the examiner to find pathology in the lung that was formerly thought impossible.

(3) In all obscure chest cases, plates should be taken in various positions, and interpreted in the light of the physical signs and the history.

DISCUSSION

DR. DAVID P. BARR: In several instances in the past two months Dr. Singer's method has been of the greatest use, in the diagnosis of conditions which otherwise would not have been recognized. I might mention one example. Following a gall-bladder operation a patient developed the signs of a simple pleurisy accompanied by some fever and toxemia. From the physical signs and from the ordinary X-ray picture of the chest, this seemed to be an uncomplicated pleurisy with effusion. With the introduction of air and pictures in the lateral position, Dr. Singer found that in addition to the pleuritic effusion, there was an encapsulated empyema. This was definitely localized and operated upon with resulting improvement of the condition of the patient. This case together with several others which might be mentioned have convinced me that Dr. Singer has introduced a most important method of diagnosing obscure chest conditions.

DR. J. J. SINGER: I was in hopes that Dr. Moore and Dr. Zink would say I was wrong in regard to the relative value of the changes in position, especially the lateral position. 95 per cent of roentgenologists use stereoscopic methods in chest examination, and the other 5 per cent use flat plate because it is cheaper. That was our reason for using the flat plate and learning the value of the flat plate, and I feel sure that when correctly interpreted, these conditions as noted in the picture, remain and I might also add that the flat plate is also a good method. Personally I prefer the simple flat plate together with the physical signs and the X-ray plate to help in making my diagnosis.

3. OLFACTOMETRY AS A DIAGNOSTIC AID.—By DR. ARTHUR W. PROETZ.

Little is known concerning the function of the first cranial nerve. The study of this function is rendered particularly difficult; first, by the purely subjective nature of the function; second, by the simplicity of the end organ; and third, by the lack of a suitable method of measurement, quantitative and qualitative, of the sense of smell. A short outline of existing methods was presented to indicate the difficulties of the problem. The subject of this contribution is a system of exact olfactometry together with a simple apparatus for making clinical tests.

This apparatus consists of a rack of wide-mouthed, glass-stoppered bottles arranged in ten rows to form a square. These bottles contain odoriferous substances of various dilutions—one row to each odor. The ten bottles in each row contain substances graded in intensities. The substances are: a. Iodoform, b. Methyl salicylate, c. Amyl alcohol, d. Xylol, e. Nitrobenzol, f. Phenol, g. Guaiacol, h. Cinnamon oil, i. Eugenol, and j. Coumarin. They are chosen for their distinctive odors, for their relative chemical

stability, and for their solubility in oil. Oil-soluble substances were chosen to guard against evaporation and error. The minimum perceptible amount of substance in solution is termed one "olfact." It is expressed in grams per liter. The concentrations in the test rack are from one-quarter to a hundred olfacts. The procedure of making the test was explained, and a chart was presented for a simple, uniform record of findings.

With this method it is hoped that functions of the various structures of the olfactory brain may be determined and that it may be possible with this knowledge to localize many forebrain lesions.

DISCUSSION

DR. A. D. CARR: Certainly Dr. Proetz has been untiring in his method which if continued will be of considerable assistance in diagnosing primary tumor of the brain and brain abscesses. Personally I know very little about the olfactory nerve. We know so little about the olfactory nerve and especially about the location of smell that the introduction of any method that will give us information along these lines is a very considerable advance. I think there is no reason why we should not use it on all our cases in Barnes.

DR. BARNEY BROOKS: I should like to ask Dr. Proetz if odors of complex chemical substances are related to any particular group in the molecules. Also if a patient's ability to detect an odor of a certain chemical compound is diminished, is there an associated diminution of sensibility to the aroma of substances of a similar chemical constitution?

DR. A. W. PROETZ: That is not the case. It has been found that light thrown through chambers containing certain odors will produce certain spectral bands. It has been found that two substances that smell alike very often give different bands, and various substances that smell different will give similar bands. Often those chemically related do not coincide in these tests.

DR. J. J. SINGER: Why is it that in the sense of smell, in these tests, one can oftentimes remember a picture but cannot remember a smell?

DR. PROETZ: That is a point which I would like to work out. It is purely subjective. There is no word in English that corresponds to "visualize" with regard to the sense of smell. Personally I think I can remember certain smells.

4. THORACIC LYMPHANGIOSTOMY: AN EXPERIMENTAL AND CLINICAL STUDY.—By DR. EDWIN P. LEHMAN AND DR. GLOVER H. COPHER.

Costain in 1922 proposed the drainage of the thoracic duct in general suppurative peritonitis for the purpose of relieving toxæmia and thereby giving the peritoneum an opportunity to overcome the local infection. He reported experimental work substantiating his proposition.

The present work is a repetition of Costain's experiments and in addition experiments applying the same principle to the relief of toxæmia in intestinal obstruction. The results show (1) that Costain's lethal control standard is not necessarily lethal, (2) that the influence of lymphangiostomy on general peritonitis from a gangrenous appendix is not favorable and (3) that its influence on the toxæmia of obstruction is doubtfully good. In addition a clinical case of death from general peritonitis in spite of lymphangiostomy is recorded.

DISCUSSION

DR. BARNEY BROOKS: This paper by Drs. Lehman and Copher indicates the inadvisability of expecting beneficial results to follow drainage of the thoracic duct in instances of infection of the peritoneum or obstruction of the intestine. In the latter condition

the futility of this procedure benefiting the patient was emphasized by some experimental work which I carried out a few years ago. In this experimental work it was shown that the toxin produced in an obstructed loop of intestine could be recovered from the thoracic duct only in instances in which there was an associated interference with the blood supply of the obstructed intestine, but even under this condition the amount of toxin passing into the thoracic duct was in all probability a relatively small proportion of the amount of toxin absorbed. Furthermore the toxic substance was found so potent and it was so quickly fixed by the tissues that it would seem improbable that beneficial results would follow drainage of the thoracic duct.

DR. COPHER: Before Costain's article appeared most surgeons greatly feared the formation of a thoracic duct fistula. It was thought that such a patient would surely die of inanition.

Wilms in 1910 drained the thoracic duct in a case of fat embolism and the case recovered.

Murphy and Brooks recovered a lethal dose of toxin from the thoracic duct produced by an experimental intestinal obstruction.

Following Costain's article, Edwards in the February, 1924 issue of *Surgery, Gynecology and Obstetrics* reports the use of thoracic lymphangiostomy in a case of puerperal sepsis. He found the same type of organism in the cervical canal and in the drainage from the thoracic fistula. Edwards is of the opinion based upon his 1 case that it is a useful adjunct in the treatment of puerperal sepsis.

Thoracic duct lymphangiostomy is a relatively new surgical procedure and great caution must be used in selecting cases for the operation as its value is very doubtful.

MEDICAL SOCIETY OF ASSISTANT PHYSICIANS OF STATE HOSPITALS

The fifth meeting of the Medical Society of the Assistant Physicians of the Missouri State Hospitals was held at State Hospital No. 1, Fulton, on December 10, 1924.

The superintendent and medical staff entertained the visiting physicians by giving a dance on the evening of December 9 which was attended by the visitors from out of town as well as many prominent people of the city of Fulton and the county. Those who attended were kind enough to express themselves as well pleased with the social features of the entertainment and seemed delighted with the dance and dinner given the next day to the guests.

Promptly at 8:00 o'clock on the morning of December 10 the Society was called to order by Dr. D. H. Young, the president, who announced Dr. M. O. Biggs, Superintendent, and the guests listened to a splendid address welcoming the visitors to all that State Hospital No. 1 afforded socially and medically. The regular order of business was then taken up and after being dispensed with, the scientific program was taken up and Dr. S. U. Wyckoff gave us a splendid paper on "Epithelioma." The paper covered the known pathology and etiology as well as several varieties, treatment, etc. The paper was well received and was discussed by every one present. Following this paper and the discussion on it, a splendid talk was given by our distinguished guest, Dr. Joseph Grindon, St. Louis, on the subject of cancer and at the same time a fine skin clinic was held by this well known dermatologist. The material for this clinic was furnished by the hospital staff from patients of this institution. Later, nine cancer cases were shown by Dr. Bryan, of the hospital staff, being cases treated at this hospital by radium, with most excellent results in nearly all of the cases, there being only two exceptions where the results

were not shown to be fine. The cases were most interesting to all who saw them and were much discussed.

After a fine dinner the Society came together at 1:00 o'clock and listened to a paper by Dr. W. J. Bryan, of the hospital staff, on "Cancer of the Uterus." The doctor's paper covered this interesting subject well and laid stress on the early diagnosis of this form of cancer. A very general and interesting discussion followed by every one present.

Dr. D. H. Young, of the hospital staff, read a paper on "Malignant Neoplasms, Cancer." This paper traced the origin, growth and histogenesis of neoplasms of a malignant character. The paper elicited some discussion from those present.

The next on the program was Dr. Dudley Robnett, of Columbia, who gave us a very instructive talk on cancer, with lantern slides, illustrating types of cancer which he had treated by radium. This was an admirable talk and was indeed interesting from every viewpoint.

There was a good attendance from the state hospitals and physicians from Fulton, Mexico and Columbia. This meeting was voted with one accord by the members and visitors the most interesting meeting yet held by this Society and a very worthy effort.

The Society adjourned to meet at State Hospital No. 3, Nevada, some time in February, 1925, the date not definitely fixed.

BOONE COUNTY MEDICAL SOCIETY

A meeting of unusual interest was held at the Boone County Hospital, Columbia, by the Boone County Medical Society, October 28, 1924. The members of Randolph, Audrain, Callaway, Cole, Howard and Cooper County Medical Societies were invited to attend.

Dr. Elsworth Smith, St. Louis, conducted a cardiac clinic which proved instructive and Dr. E. H. Skinner, Kansas City, gave an interesting talk on "Surgical Radiation."

Following the meeting a dinner was served at the Country Club. About fifty physicians were present and the members from each county favored us with short talks.

Meeting of December 3, 1924

The regular monthly meeting of the Boone County Medical Society was held at Boone County Hospital, Columbia, December 2, 1924.

Following the disposal of routine business the annual election was held and officers as follows elected: President, Dr. Dudley S. Conley, Columbia; vice-president, Dr. A. W. Kampschmidt, Columbia; secretary-treasurer, Dr. Wm. O. Fischer, Columbia; delegate, Dr. J. E. Thornton, Columbia; alternate, Dr. W. R. Shaefer, Columbia.

At the monthly meeting of the staff of Boone County Hospital, on the same date, the following officers were elected for one year: Dr. Frank G. Nifong, Columbia, chief of staff; Dr. J. E. Thornton, Columbia, assistant chief of staff; Dr. Wm. O. Fischer, Columbia, secretary.

WM. O. FISCHER, M.D., Secretary.

CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society held its regular quarterly meeting in the Ted McCadden Hall, Thursday afternoon, December 11. The meeting was called to order by the president, Dr. R. D. Ramey, of Garden City.

Dr. J. S. Triplett, of Harrisonville, read a very interesting paper on the subject of "Umbilical Infection." The doctor gave a detailed description of the anatomical structures of the umbilical cord and then spoke quite extensively on the subject of infection

of the cord and the particular structures of the cord chiefly involved in this abnormal infective process, giving the preventive and curative treatment of these cases. He also reported a very interesting case of a young girl, aged 11 years, with a chronic infection of the umbilicus, which was treated for sometime with curettements and various antiseptics with no results. Later the doctor made a deep incision in the involved structures and found an imbedded brass pin which had probably been deeply imbedded in the tissues since the birth of the child. Removal of the pin was followed by prompt recovery.

Dr. H. A. Brierly, of Peculiar, reported a number of cases of abscess of the lungs, pointing out the fact that in several of the cases under his supervision, the X-ray failed to make a correct diagnosis. The doctor reported cases in which the abscess ruptured into the bronchial tubes with expectoration of the pus and recovery, also other cases in which a surgical operation was performed by making an incision through the chest walls and into the lung tissue with evacuation of the pus and recovery of patient. The report of these cases was very interesting and instructive.

Dr. T. W. Adair, of Archie, reported a number of cases of chronic cystitis, some of which were due to infection of the bladder and others to a stone in the bladder. The doctor also reported an interesting case of retention of urine in bladder with marked distension of the bladder and intense pain, where it was impossible to remove the urine by catheterization on account of obstruction of the urethra, in which case the doctor made a puncture through the abdominal wall and into the bladder and drew off the urine through the cannula with great relief to the patient. All of these cases were discussed by the members present.

The election of officers for the coming year was as follows: President, Dr. H. A. Brierly, Peculiar; vice-president, Dr. R. M. Miller, Belton; secretary, Dr. W. L. Viers, Pleasant Hill; delegate to the Missouri State Medical Association, Dr. T. W. Adair; alternate, Dr. R. D. Ramey, and Drs. H. A. Brierly, J. S. Triplett, and R. D. Ramey as board of censors.

The Society adjourned to meet the second Thursday in March, 1925.

M. P. OVERHOLSER, M.D., Secretary.

CLAY COUNTY MEDICAL SOCIETY

Our final meeting for 1924 was held at the Major Hotel in Liberty, on Thursday evening, December 18. The weather was almost prohibitive being below zero, yet about twenty members and wives gathered around the festal board, presided over by Dr. J. H. Rothwell. A dinner of wild duck, half a roast mallard for each guest, with all the "trimmings" was a magnificent tribute to medical marksmanship, for Dr. Rothwell and Dr. Baird modestly confessed to twenty-four of the winged trophies. Mrs. George Hoxie, of Kansas City, visited the society at this meeting, and addressed the Ladies' Auxiliary after dinner. Dr. Gaines closed the festal ceremonies with two readings, rendered by request.

The scientific session was a symposium on obstetrics, in which Drs. Maltby, Goodson, Matthews, Miller and Wysong each had 10 minute talks. The evening was all too short for the subject, Dr. Rothwell's talk being deferred till next meeting.

The degree "Dean of Clay County Medicine" was created by unanimous vote at this meeting and conferred, with a free life membership, upon Dr. E. H. Miller, who has just rounded out fifty years in the Clay County Society. It was deemed fitting that this, the highest honor within our power to bestow, should belong to Dr. Miller, whom to know is to love, and it was a touching, tender speech, in which the good Doctor accepted.

Election of officers for 1925, resulted as follows: President, Dr. J. E. Baird, Excelsior Springs; vice-president, Dr. W. L. Wysong, Liberty; secretary-treasurer, Dr. J. J. Gaines, Excelsior Springs; delegate, Dr. J. H. Rothwell, Liberty; censor, Dr. W. H. Goodson, Liberty.

Dr. Elizabeth Smith, of Liberty, was elected to membership with credentials from Gentry county.

J. J. GAINES, M.D., Secretary.

HOWELL-OREGON COUNTY MEDICAL SOCIETY

The Howell-Oregon Medical Society met in regular session in the Masonic Hall, Willow Springs, November 26, at 2:30 p. m., with the following members present: Drs. Cox, Terrill, Wall, Vaughn and Davis.

The meeting was called to order by the president, Dr. D. D. Cox. Dr. J. C. B. Davis was appointed secretary protem. The reading of the minutes was omitted, owing to the absence of the secretary.

Drs. Wall and Vaughn each read valuable papers. "Clinical Disorders of the Heart Beat" was the subject of the former, and "Feeble-mindedness and Treatment" that of the latter. These subjects were handled in a very able manner and all present took a lively interest in their discussion.

At the request of the president, Dr. J. C. B. Davis gave a brief report of the Southwest Missouri Medical Association meeting which was held in Springfield last week.

Adjournment until next regular meeting.

J. C. B. DAVIS, Secretary Protem.

The Howell-Oregon County Medical Society met at 2:00 p. m. in the I. O. O. F. Hall, West Plains, January 8. The following were present: Drs. D. D. Cox, Pomona; H. A. Thompson, Lanton; E. R. Keen, R. E. Hogan, J. W. Bingham, P. D. Gum, A. H. Thornburgh, L. E. Toney, E. C. Bohrer, West Plains; J. C. B. Davis, Willow Springs; H. W. Maloney, F. A. Barnes, Thayer.

The meeting was called to order by Dr. Cox, president. The minutes of the last meeting were read and approved.

Dr. L. E. Toney read a very interesting and instructive paper on "Systemic Disturbances from Pus Absorption in Infected Tonsils and Paranasal Sinuses," which was discussed by Drs. Davis, Barnes, Gum, and Thornburgh.

The by-laws of the Society were amended to raise the local annual dues from \$1.00 to \$5.00, the vote being unanimous.

The following officers were elected for the year 1925: President, Dr. J. L. Eblen, Alton; vice-president, Dr. E. C. Bohrer, West Plains; secretary-treasurer, Dr. F. A. Barnes, Thayer.

The application of Dr. L. E. Toney, formerly of Piedmont, now of West Plains, was reported favorably and he was accepted into membership.

The Society adjourned to meet the last Thursday in February at Thayer.

E. CLAUDE BOHRER, M. D., Secretary.

JASPER COUNTY MEDICAL SOCIETY

The first meeting of the Jasper County Medical Society for 1925 was held at the Connor Hotel, Joplin, January 6, 1925. The following members and guests were present: Drs. L. C. Chenoweth, S. A. Grantham, M. O. Coombs, R. L. Neff, W. Post, J. W. Barson, H. C. Powers, A. B. Clark, W. E. Craig, S. H. Miller, R. A. Thornton, J. I. Tyree, A. M. Gregg, H. D. McGaughey, B. L. Kissel, W. H. Malory, D. R. Hill, C. M. Balsley, R. M. James, J. A. Chenoweth, M. B. Harutun, A. R. Snyder, C. C. Cummings, H. W. Dickerson, E. E. Moody, H. A. Leaming, Joplin; J. W. Clark, Carterville; E. D.

Hatcher, L. B. Clinton, W. E. Steele, E. B. Powers, R. W. Webster, K. E. Baker, H. A. LaForce, W. B. Post, Carthage; B. A. Dumbauld, W. W. Waggoner, R. M. Stormont, Huffines, P. L. Pritchett, Webb City; B. M. Henry, Alba; O. L. Alberty, Carl Junction; R. C. Lowdermilk, F. L. McKinney, H. A. Browne, Galena, Kansas; J. H. Boswell, W. H. Iliff, Baxter Springs, Kansas; L. W. Baxter, C. T. Reid, Columbus, Kansas; B. J. McKay, J. F. McNaught, E. C. Lightfoot, Girard, Kansas; W. C. Sturm, H. E. Marchbanks, C. H. Smith, Pittsburg, Kansas; C. R. Greene, Rochester, Minnesota.

Following the banquet served in the Colonial Room, the outgoing president, Dr. L. B. Clinton, introduced the officers for 1925. Dr. H. D. McGaughey, the new president, made an excellent address in which he gave an outline of the program committee's plan for the 1925 meetings. He urged a better attendance at meetings and closer cooperation from all members of the society.

Dr. C. R. Greene, of the Mayo Clinic, gave a most interesting talk on nephritis. He spoke of the different types of nephritis, of valuable functional tests and of modern treatment.

JAMES I. TYREE, M.D., Secretary.

MILLER COUNTY MEDICAL SOCIETY

At the Miller County Medical Society meeting held at Eldon, January 4, the following officers were elected: President, Dr. D. H. Kouns, Tuscumbia; vice-president, Dr. W. L. Allee, Eldon; secretary, Dr. E. C. Shelton, Eldon; delegate to State Association meeting, Dr. G. D. Walker, Eldon. The society meets regularly the first Sunday in each month.

MISSISSIPPI COUNTY MEDICAL SOCIETY

The Mississippi County Medical Society met at Charleston, January 2 and effected a reorganization for 1925. The election of officers for the new year resulted as follows: President, Dr. S. P. Martin, East Prairie; vice-president, Dr. James R. Lee, Charleston; secretary-treasurer, Dr. H. L. Reid, Charleston; censor, Dr. W. S. Love, Charleston; delegate to State Association, Dr. A. W. Chapman, Charleston.

The secretary was instructed to collect the annual dues from the members and forward to the State Association.

Dr. Lee reported an interesting case of cranial fracture at the base due to a fall from an automobile on a paved road. A round table discussion with both medical and surgical aspects was indulged in, with respect to this and other cases.

Our county organization has always been and is now at the service of the Committee on Health and Public Instruction of the State Association, in furthering safe and sane legislation for the people as against the unscrupulous and unjust practices of professional quacks and charlatans of all degrees.

The Society adjourned to meet the first Monday night in February and the first Monday night of each month thereafter, during the winter and spring months.

H. L. REID, M.D., Secretary.

PULASKI COUNTY MEDICAL SOCIETY

The Pulaski County Medical Society met at Waynesville, December 24, 1924, in the office of Dr. L. Tice.

The following officers were elected for 1925: Dr. C. A. Talbot, Dixon, president; Dr. W. J. Sell, Crocker, vice-president; Dr. E. A. Oliver, Richland, secretary-treasurer; Dr. C. Mallette, Crocker, delegate; Dr. A. J. Crider, Dixon, alternate; Drs. H. C.

Murphy, R. E. Howlett, Richland, and L. E. Rolens, Dixon, censors.

In regard to the formation of societies of two or more counties this society prefers continuing one county society as the unit of organization but suggests to the program committee joint county meetings for visiting lecturers, especially during the summer months.

E. A. OLIVER, M.D., Secretary.

RAY COUNTY MEDICAL SOCIETY

A meeting of the Ray County Medical Society was held in the Assembly Room of the Court House at Richmond, December 10, 1924, and the following officers were nominated: President, Dr. Grover W. Gaines, Rayville; vice-president, Dr. Marvin Grimes, Hardin; secretary, Dr. R. L. Hamilton, Richmond; treasurer, Dr. T. F. Cook, Richmond. On motion of Dr. L. D. Greene, seconded by Dr. C. B. Shotwell, all nominations were closed and the secretary instructed to cast the entire vote of the society for the above named officers.

Owing to the condition of country roads quite a number of associates from other towns were not present but our newly elected worthy president made the hill on high.

We had the pleasure of a visit from Dr. Herman E. Pearse, Kansas City, Chairman of the Committee on Health and Public Instruction of the State Association. After lunch with our Chamber of Commerce, Dr. Pearse delivered an interesting and scientific discourse on "The Management of Malignant Diseases from a Radiological and Surgical Standpoint." The society thoroughly enjoyed Dr. Pearse's practical talk and so expressed themselves by a vote of thanks. No physician in the state has done more for ethics in the medical profession than the doctor and we welcome his return any time he can visit us.

R. L. HAMILTON, M.D., Secretary

BOOK REVIEWS

LANG'S GERMAN-ENGLISH DICTIONARY OF TERMS USED IN MEDICINE AND THE ALLIED SCIENCES. Edited and Revised by Milton K. Meyers, M.D., Neurologist to the Northern Liberties Hospital. Third edition. Cloth. Price, \$7. Pp. 613, Philadelphia: P. Blakiston's Son & Co., 1924.

All who are interested in the understanding of German medical literature welcome a new edition of Lang's German-English Dictionary, as the second edition was published in 1913.

Dr. Meyers has added over 4000 new terms, including chemistry, biology and pathology, so that this new edition contains about 53,000 definitions and still holds the place as a standard.

R. M. H.

DIFFERENTIAL DIAGNOSIS. Volume 11. By Richard C. Cabot, M.D., Professor of Medicine and Professor of Social Ethics at Harvard University; formerly Chief of West Medical Service, Massachusetts General Hospital, Boston. Presented through an analysis of 317 cases. Third edition, profusely illustrated. Philadelphia and London. W. B. Saunders Company. 1924. Price, \$9.00 net, per volume.

Cabot completes in this volume, after an interval of four years, the revision of the third edition of his well known "Differential Diagnosis" which he began with the printing of the first volume in 1920. This volume deals with nineteen further symptoms, including abdominal and other tumors, vertigo, dyspepsia, diarrhea, hemoptysis, hematemesis, glands,

blood in the stools, and others. The discussions are greatly amplified and revised in the light of recent advances in biochemistry, dietetics and other laboratory procedures.

W. B.

A TEXT-BOOK OF PATHOLOGY. By William G. MacCallum, M.D., Professor of Pathology and Bacteriology. Johns Hopkins University, Third edition, Thoroughly revised. Octavo volume of 1162 pages with 575 original illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$10.00 net.

The publication of MacCallum's Pathology in 1916 gave us for the first time a distinctive and original text on this subject in the English language. In 1920 the book was reprinted with some additions, but little revision was needed. The present edition represents a more careful revision, the replacement of some illustrations and the addition of considerable new material. The subjects of metabolism, the new understanding of diabetes and rickets especially have been given careful consideration.

In the opinion of the reviewer there is no more valuable book on this subject published, either for use as a text for medical students or as a reference book for practitioners of medicine than this volume.

R. L. T.

A TEXT-BOOK OF PHARMACOLOGY AND THERAPEUTICS. Or the Action of Drugs in Health and Disease. By Arthur R. Cushny, M.A., M.D., LL.D., F.R.S., Professor of Materia Medica and Pharmacology in the University of Edinburgh. Eighth edition, thoroughly revised. Illustrated with 73 engravings. Lea & Febiger. Philadelphia and New York, 1924. Price \$6.00.

Dr. Cushny's eighth edition of "Pharmacology and Therapeutics" is, as were the previous editions, an excellent text and reference book. The new material, such as that on insulin and the cardiac drugs, is comprehensive, brief and conservative.

A. S. W.

ESSENTIALS OF PRESCRIPTION WRITING. By Cary Eggleston, M.D., Assistant Professor of Pharmacology, Cornell University Medical College, New York City. Third edition, Revised. Cloth, 146 Pp., Philadelphia, W. B. Saunders Company, 1924.

This little manual for students would be of considerable value to most of us for reference. It is small, of the pocket type, and contains only 146 pages. One might criticize it in saying that the Latin form given is only one of several forms, for in the official continental prescriptions the active voice is used instead of the passive, and since the active voice is a shorter form some of us prefer it.

It seems to the writer, however, that more effort should be spent in developing a good English form for prescription writing.

G. H. H.

OPERATIVE SURGERY, COVERING THE OPERATIVE TECHNIC INVOLVED IN THE OPERATIONS OF GENERAL AND SPECIAL SURGERY. By Warren Stone Bickham, M.D., Ph.D., F.A.C.S. In six volumes. Volume V. Cloth, Price, \$10 per volume. Pp. 880, with 1118 illustrations. Philadelphia: W. B. Saunders Company, 1924.

In the fifth volume of Bickham's Operative Surgery operative treatment of diseases of the colon and rectum together with the genito-urinary tract is considered.

This volume is not only written in a descriptive, concise and literary manner but it is also so well classified and profusely illustrated that one gains a great deal of information by a few minutes reference.

The surgical procedures of this volume are well recognized, show originality and the individual effort of an author working in the present day.

J. G. M.

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies
Issued Monthly under direction of the Publication Committee

VOLUME XXII

MARCH, 1925

NUMBER 3

E. J. GOODWIN, M. D., EDITOR
901 Missouri Theatre Building, St. Louis, Mo.

PUBLICATION } W. H. BREUER, M. D., Chairman
COMMITTEE } C. B. FRANCISCO, M. D.
 } M. A. BLISS, M. D.

ORIGINAL ARTICLES

URETERAL STONE. ITS DIAGNOSIS AND TREATMENT*

CLINTON K. SMITH, M.D.

KANSAS CITY, MO.

The syndrome called ureteral colic has, I believe, been largely regarded by the profession in general as pathognomonic of ureteral stone and, contrariwise, in its absence stone has often been given very little if any consideration. However, as I shall show later, other lesions of the ureter are responsible for colic more often than stone while, on the other hand, stone is frequently the cause of abdominal pain which is not characteristic of ureteral colic.

RADIOGRAPHIC EVIDENCE

The present day high degree of efficiency attained in the management of cases of ureteral stone in contrast to previous "hide and seek" methods, is a direct result of the splendid achievements of roentgenology in combination with the perfection of modern diagnostic instruments and methods in the field of urology. Inasmuch as it is well recognized that ureteral stone is often the cause of several different types of abdominal pain, preoperative examination of those cases in which the pain is of the chronic, recurring type should undoubtedly include an X-ray picture.

Lest it be misunderstood that radiographic evidence alone is conclusive, I wish to point out that, while the X-ray is indispensable, this evidence of itself is inaccurate and incomplete. First: Even when a distinct shadow is seen it is often uncertain as to whether or not it is produced by a ureteral stone. It must be shown that the stone shadow is in contact with a ureteral catheter shadow. (Fig. 2. A.) Second: Not all stones are of a size or composition capable of producing a shadow. Third: In those cases of ureteral lesions which produce colic-like pain the radiogram alone tells

us nothing. However, in combination with the use of urological diagnostic instruments I believe that a correct conclusion can be reached in a very high percentage of the cases, as I shall presently show.

Let us first consider those cases in which the radiogram shows a distinct shadow; apparently a stone in the ureter. With a history of colic and dysuria and perhaps blood in the urine, this evidence might appear conclusive, yet there are several possible chances for error. The case in Fig. 2, B, is illustrative. This case had everything required in symptoms and X-ray findings necessary for a diagnosis of stone, yet the radiograph with the catheter in place shows a distinct interval between the two shadows. The proximity of the appendix to the ureter had produced a ureteritis, which gave rise to dysuria, hematuria and pain.

Again, it is entirely possible that the radiograph may show a shadow caused by a phlebolith situated just outside the ureter, and at the same time the patient might be coincidentally suffering from ureteral stricture, which would provide all the necessary clinical evidence. In a case of this type the ureteral X-ray catheter is indispensable in establishing the relationship of the shadow-casting agent to the ureter. Even with the ureteral catheter in place mistakes are possible if the shadow-casting agent does not lie in the same plane as the catheter; in other words, at a different depth, producing a shadow which appears to be in contact with that produced by the catheter. This mistake can be avoided by making a second exposure, on the same film, after shifting the tube, or another film can be made with the tube at a different angle. If the stone is in the ureter the shadow moves with the catheter shadow; otherwise an interval is seen in the second exposure. (Fig. 3. A and B.) The case in Fig. 3, B, is of interest as an example of the contingency described above.

Another valuable aid in doubtful cases is the ureterogram. If the ureter is clearly outlined, filled with opaque media, and stereoscopic films are made, it can be seen conclusively whether or not the supposed stone is in the ureter.

*Read before the sixty-seventh annual meeting Missouri State Medical Association, Springfield, May 6, 7, 8, 1924.

Finally, it must be evident that radiographic evidence must be augmented by the use of the ureteral catheter in order to eliminate a certain amount of error.

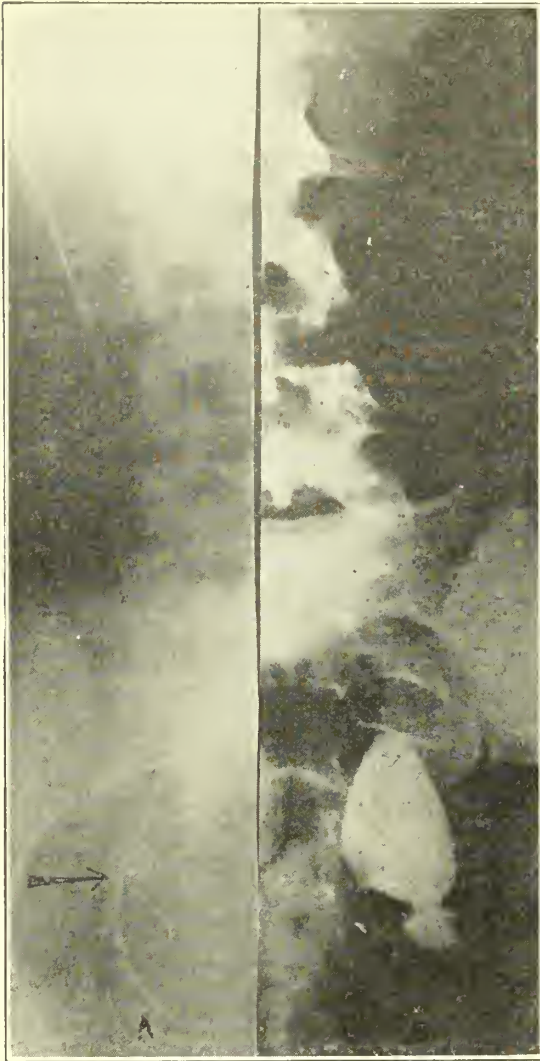


Fig. 1. A. Stone in the lower ureter. Patient was operated upon for appendicitis although this history was definite of several attacks of colic with dysuria.

B. Mammoth stone in the lower ureter. Patient was operated upon for appendicitis and later an ovary was removed in attempt to relieve her pain. The history was definite of pain with dysuria of several years standing. The radiograph would have made the diagnosis obvious in either case, and the dysuria should have suggested the advisability of this procedure.

SYMPTOMATOLOGY

While pain is the cardinal symptom of ureteral stone, it is often variable as to character and location; it may be situated in any part of the abdomen. I recall having seen a case in which the pain was complained of on the side opposite to the location of the stone. This stone was in the extreme lower ureter.

The pain may be sharp and colic-like, or of the dull aching type. This latter type is probably a result of ureteral inflammation occurring after the progress of the stone has been arrested, and if the history is carefully gone into a previous experience of sharp, colic-like pain can usually be uncovered.

The pain of ureteral stone has provided a most vicious man-trap for the surgeon from which on many occasions he has been able, with ill grace, to extricate himself. The wise operator of today is becoming more and more wary of this bait.

While ureteral stone has masqueraded as a wide variety of abdominal pathology from lesions of the rectum to those of the gallbladder, the appendix seems to be the favorite. It may well be excuseable for the surgeon who sees the patient with a primary attack of colic in the lower right abdomen, in an environment where laboratory or X-ray facilities are not available, to make a diagnosis of appendicitis and proceed accordingly. But in view of the fact that many surgeons of ability and experience have come to accord a certain degree of mythology to the chronic appendix, it would seem that a greater number of these so-called chronic cases should at least be given the benefit of an X-ray picture before operation.

I appreciate that to advocate a routine urological examination in every case of chronic abdominal pain would be an untenable position. But, even so, I believe that careful history taking and painstaking general examination will elicit a sufficient element of doubt in the class of cases in which mistakes have previously occurred to suggest the advisability of an urological investigation. Both cases in Fig. 1 gave a distinct history of repeated symptoms of dysuria during the attacks of pain.

Patients suffering from any form of ureteral obstruction—and obstruction is the direct cause of ureteral colic, including the stone cases—usually exhibit one or more of the following symptoms: tenderness over the kidney, dysuria or abnormal urinary findings.

No inference as to the size of the stone can be drawn from the clinical symptoms. Often a stone comparative in size to a grain of wheat will obstruct the ureter and produce colic of the most extreme type, while in other instances rather large stones pass downward with only a moderate degree of distress. The degree of pain is governed by the acuteness of the ureteral block. The small stones escape from the kidney and pass readily to a narrowed portion of the ureter, usually the iliac crossing or the uretero-vesical juncture, and there set up a sudden block, throwing the ureter into violent spasmodic contractions; while on the

other hand the passage of the larger stones is often rather an evolutionary affair, a sort of gradual dilatation of the ureter allowing the stone to pass downward in a more leisurely manner.

Hematuria is probably the symptom of importance secondary to pain. But both pain and hematuria are common with other lesions of the upper urinary tract; in fact, any form of ureteral obstruction is productive of these symptoms.

How then, conceding that other forms of ureteral obstruction are also productive of colic and hematuria are we to suspect stones in these X-ray negative cases? I confess that I am at a loss to offer any points of differentiation from the standpoint of clinical symptoms or even laboratory examination of the urine.

In my experience the clinical symptoms of stone, ureteral stricture, the kinking or knuckling of the tax, tortuous, ureter are entirely without points of difference. All cases in Fig. 4 had typical ureteral colic with hematuria, yet all were definitely proven to be stone negative. In this situation recourse to the special urological examination remains. In fact I feel that any patient suffering with ureteral colic is afflicted with an ailment of sufficient importance to be entitled to a complete analysis of the upper urinary tract. This seems all the more pertinent when we consider that these other lesions are more often productive of colic than stone. An analysis of my files during the past five years discloses that in cases of colic with a history of dysuria or hematuria or both, stone was present in only 24.2 per cent of the cases.

UROLOGICAL EXAMINATION

The use of the ureteral catheter has been previously described in discussing radiographic evidence.

With the urological examination no one feature is conclusive. Probably the most dependable is the wax tip bougie. Without going into the detail of its preparation and use it will suffice to say that the principle of the thing is, that in passing this through the ureter contact with the stone almost invariably occurs and consequently the wax is scratched. It is, of course, quite essential to be certain that no scratch is made in introducing the bougie into the bladder before the ureter is entered.

The ureterogram, while not as dependable in itself as the wax tip bougie, is still of vast diagnostic importance. Often there is a peculiar bulb-like ending of the dilated portion of the ureter at the site of the stone lodgement which is suggestive of stone in that

small percentage of cases in which the X-ray is negative. (Fig. 5.)

In some instances if a radiograph is made immediately after the opaque medium is drained from the ureter, a sufficient amount remains about the stone to produce a shadow which otherwise would not be shown. Again—and I believe that this is an important point—the ureterogram readily discloses the character



Fig 2. A. Shadow in contact with catheter shadow. Small stone in upper ureter.

B. Stones in the appendix. Appendix was adherent to the ureter, resulting in colic, dysuria and hematuria. Note interval between stone shadow and catheter.

of the colic-producing obstruction and in many cases it is at once evident that the lesion is not characteristic of stone. The case in Fig. 3, B, is a typical example.

Finally, I believe that stone can be demonstrated in practically every instance, where stone is present, if the known refinements of urologic diagnostic technic are employed.

TREATMENT

The treatment of stone in the ureter has

passed through a number of interesting and epochal periods. With the introduction of roentgenology many shadows were seen which were wrongly interpreted as stone and consequently many needless operations were performed.

the stone after the use of the ureteral catheter. This circumstance aroused interest in the possibilities of cystoscopic removal of ureteral stones, and numerous instruments have since been devised for use through the cystoscope for the purpose of dislodging and manipulating

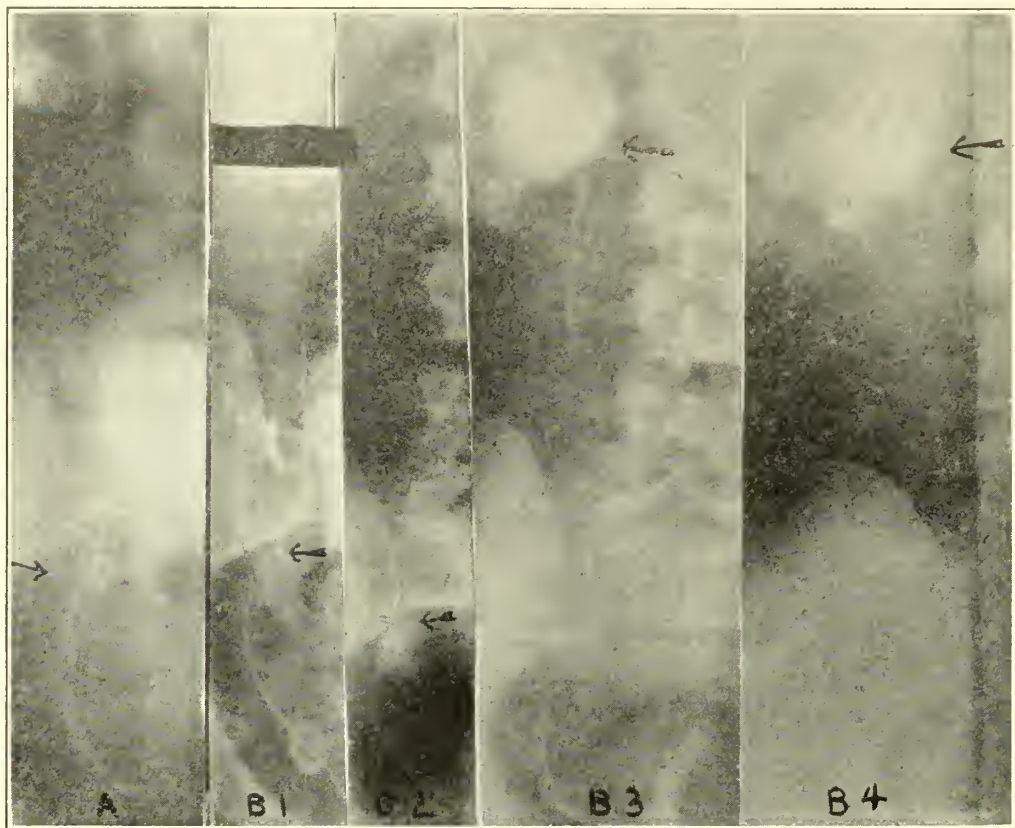


Fig. 3. A. Double exposed film with shifting of X-ray tube. Note that stone shadow is in same relation to catheter in each instance.

B-1. Small shadow apparently in contact with ureteral catheter shadow. This patient complained of colic like pain in the right loin and was operated upon in an attempt to remove the supposed stone in the lower ureter. B-2. Exposure made at angle of about twenty-five degrees, carrying catheter shadow outward away from shadow of supposed stone. Note the stone shadow in same relation to bony parts while catheter shadow is much further external. B-3. Obstruction at pelvic outlet of kidney, which is responsible for the colic-like pain. B-4. Media trapped in renal pelvis thirty minutes after withdrawal of catheter.

With the advent of the shadowgraph ureteral catheter a material decrease in the number of both diagnostic and operative errors was recorded. This diagnostic improvement appeared, at that time, to eliminate the previous errors and served to revive the confidence of many operators whose ardor had been chilled by previous unpleasant experiences, and for a time the only chance the patient had to escape an open operation was to pass the stone first.

However, as the cystoscope and ureteral catheter came to be more generally used, it was frequently noted that patients who had complained of symptoms of stone for a number of weeks or months often promptly passed

ing stones in the ureter, with the object of stimulating and hastening passage into the bladder.

Although the open operation is still the method of choice with some surgeons, it has been definitely and amply demonstrated that these stones, with few exceptions, can be consistently removed by cystoscopic manipulation. This is usually the method of choice among those well versed in the use of cystoscopic instruments. To be sure, there are cases in which the open operation is the method of choice, as for example the stones of enormous size (Fig. 1. B.), stones of unusual shape, cases in which the stone has caused a persistent, impassable block of the ureter, resulting

in retention of the urine, or cases in which cystoscopic manipulation for one reason or another is impracticable. But these comprise only a relatively small percentage of the cases, and if it is further borne in mind that a fairly large percentage of stones pass unaided with-

dependent upon the size of the stone. Quite often a greater degree of obstruction is produced by a small than a large stone. If a stone of fairly large size is movable in the ureter it often occurs that the urine passes freely around it and little or no damage oc-

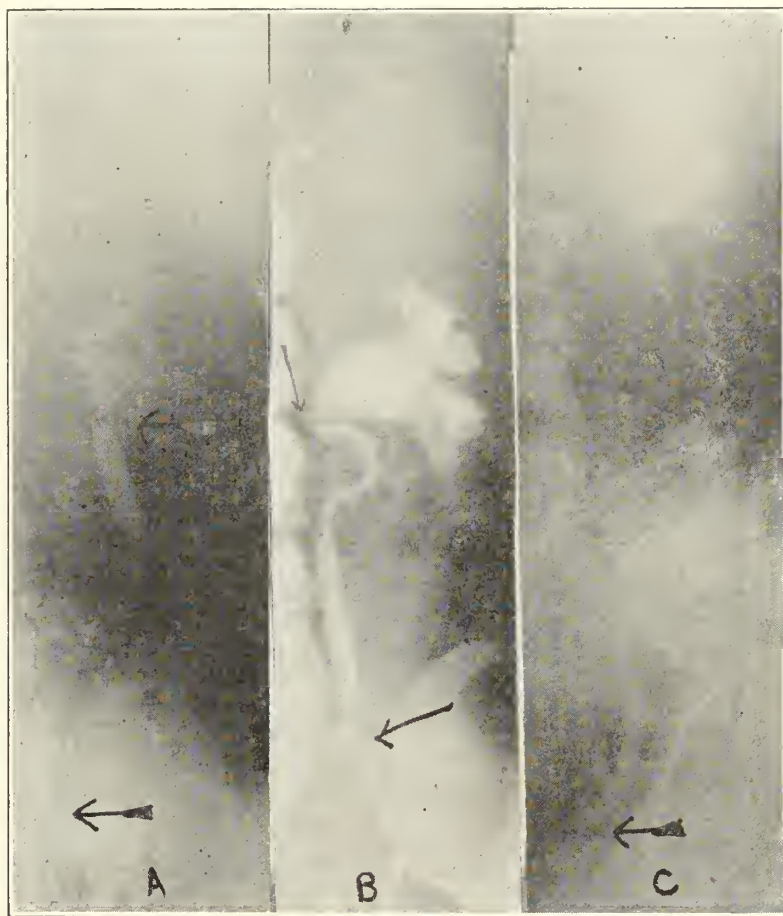


Fig. 4. A. Knuckling of lax ureter lower third. Stricture renal pelvic outlet. B. Stricture of ureter iliac crossing and renal pelvic outlet. C. Stricture ureter uretero-vesical outlet. All cases had colic-pain in the region of these lesions and hematuria.

in sixty or ninety days after the first symptom, immediate open operation is to be condemned as subjecting the patient to unnecessary surgical hazard.

Decision between the immediate removal of the stone by open operation and the more leisurely method of removal by cystoscopic manipulation, brings up several phases of the proposition for consideration. First: As to the possibility of renal damage if the stone is not immediately removed, and by what means this point may be determined. Second: Method of cystoscopic manipulation and tolerance of the patient. Third: The end results.

Renal damage is dependent upon the degree and persistence of the obstruction. It is not

cur for months or years. It will be noted in the case in Fig. 5, A. that the ureter is dilated above the stone and that in treating the same patient in Fig. 6, A. the stone has readily ascended the ureter ahead of the dilating bulb and the pyelogram shows practically no anatomical change in the kidney.

On the other hand, with the other case in Fig. 5, B. the stone (a very small one) while not visible in the radiogram was tightly lodged in a narrow part of the ureter causing persistent and almost complete ureteral block and, as can be readily seen in the pyelogram, the kidney above is practically wrecked.

In those cases in which a sudden and complete block occurs one is often tempted to re-

move the stone immediately by open operation. However, there is ample proof that complete ureteral block does not immediately result in permanent renal damage. A number of reports, experimental and otherwise, indicate that a complete block of from one to two weeks' duration does not ordinarily result in permanent renal damage.



Fig. 5. A. Ureterogram same case as Fig. 1 A., dilatation of ureter above. Practically normal kidney.
B. Small stone blocking ureter in lower third. Not shown by radiograph but demonstrated by wax bulb. The kidney is practically wrecked. Note bulb like ending of dilated ureter in each case.

Accordingly, the acute attack may be allowed to subside, after which an investigation may be made, the conditions noted which are to be dealt with and a suitable plan of treatment decided upon.

By passing a ureteral catheter it may be noted how tightly the stone is impacted and whether there is urine retention back of it and the amount. A uretero-pyelogram, particularly in cases of considerable standing, gives a rather definite idea as to whether damage has occurred to the ureter or kidney. It shows the condition of the ureter, which is an important factor in selecting a plan of treatment.

The comparative renal function of the af-

fected side with that of the opposite kidney is of importance. It often discloses situations in which the kidney above the stone has been damaged to such an extent that a nephrectomy is the best policy. Especially if any sort of open operation is to be performed.

If the kidney is seriously damaged the tendency is toward progressive and complete destruction and the majority of such cases continue to have or later develop trouble after the stone is removed. I believe that in such instances, if the stone can be removed cystoscopically, there may be some advantage in this respect, as the dilation of the ureter incident to its delivery institutes good ureteral drainage which is not difficult to maintain for some time afterwards. In this connection I wish to point out that in those cases in which open operation is done it should be determined that good ureteral drainage is maintained for some time afterwards, as stricture formation is not unusual at the site of the stone impaction.

Finally, in the choice of treatment the majority of the stones can be removed by cystoscopic manipulation, allowing the patient to escape the hazards of an open operation. On the other hand, some patients are rather intolerant to cystoscopic procedure, and in some cases the intolerance is such that the open operation is probably the choice, at least from an economic standpoint.

Those cases already referred to of impacted stone, stones of unusual size, and impassable ureteral block, should undoubtedly be placed in the open operation class.

CYSTOSCOPIC MANIPULATION

It is not possible within the scope of this discussion to describe in detail the contingencies which arise in the course of dealing with a stone by cystoscopic manipulation. The idea of the procedure can be stated, however, by saying that the object of the manipulation is to cause the stone to become engaged in the narrower part of the ureter below. The process is not altogether unlike the engagement of the fetal head in the birth canal. For this reason it is obvious that the larger the stone the more difficult is the accomplishment of this function, especially if the stone has been arrested for some time. In this connection it will be apparent that a ureter tolerated to instrumentation and well dilated before the stone begins to descend, greatly facilitates the delivery.

This brings up the question of the tolerance of the patient. Much depends upon when the treatment is begun. If cystoscopy is attempted immediately after an attack of colic and

while dysuria is still present, intolerance is to be expected. I do not believe that cystoscopy should be attempted during an acute exacerbation, except when it is deemed expedient to insert a catheter past the stone to establish drainage and afford relief from prolonged colic. The relief afforded by the catheter overshadows the distress incident to cystoscopy at

except the first or second manipulation, and have yet to experience any reactions of notable severity. In fact, it is not unusual for a patient treated in the office to return to his or her occupation.

Numerous instruments have been devised for dilating the ureter. The injection of oil and local anesthetics into the ureter have also

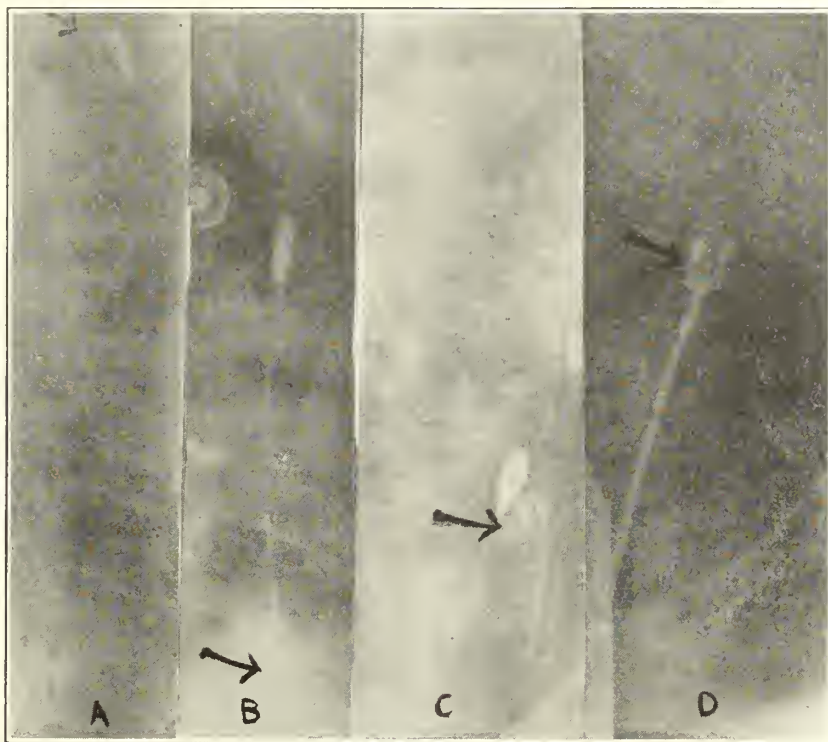


Fig. 6. A. Stone ascending ureter ahead of Buerger olive. B. Olive retained. Stone has descended to former position. C. Olive drawn against stone, making traction. D. Lewis dilator in ureter. Same patient as Fig. 1 A.

this time, and the patient is likely to be more charitable regarding his first cystoscopic experience than would be the case should the trying ordeal of ureteral colic, through which he had just passed, be immediately reproduced by cystoscopic manipulation.

In short then, the treatment should not be instituted, nor a complete urological examination attempted, until after the acute symptoms have subsided, except in that small percentage of cases, previously mentioned, in which colic persists and the insertion of a urethral catheter is permissible to secure relief. The ureter should first be dilated below the stone by passing bougies of increasing size. It is astonishing the degree of tolerance that the average patient attains if the treatment is carefully and gently carried out during the first few sittings. For a number of years I have been able to do most of this work in my office,

been advocated. Personally I have not found this to be of advantage.

Of the instruments, the olive bougies of Buerger, the Lewis dilator, the Walther bougie, and some others, are useful in special cases, but the ureteral catheter and bougie in graduated sizes are the essentials and the only instruments required in most cases.

As previously stated, the idea of the procedure is to dilate the ureter and dislodge the stone in order that it may become engaged in an outward peristaltic movement of the ureter; and I repeat that dilatation of the ureter below should be done before an attempt is made to dislodge the stone above. A catheter can then be inserted past the stone and retained in place twenty-four to forty-eight hours. In small stones this is usually sufficient to induce progress of the stone following the removal of the catheter.

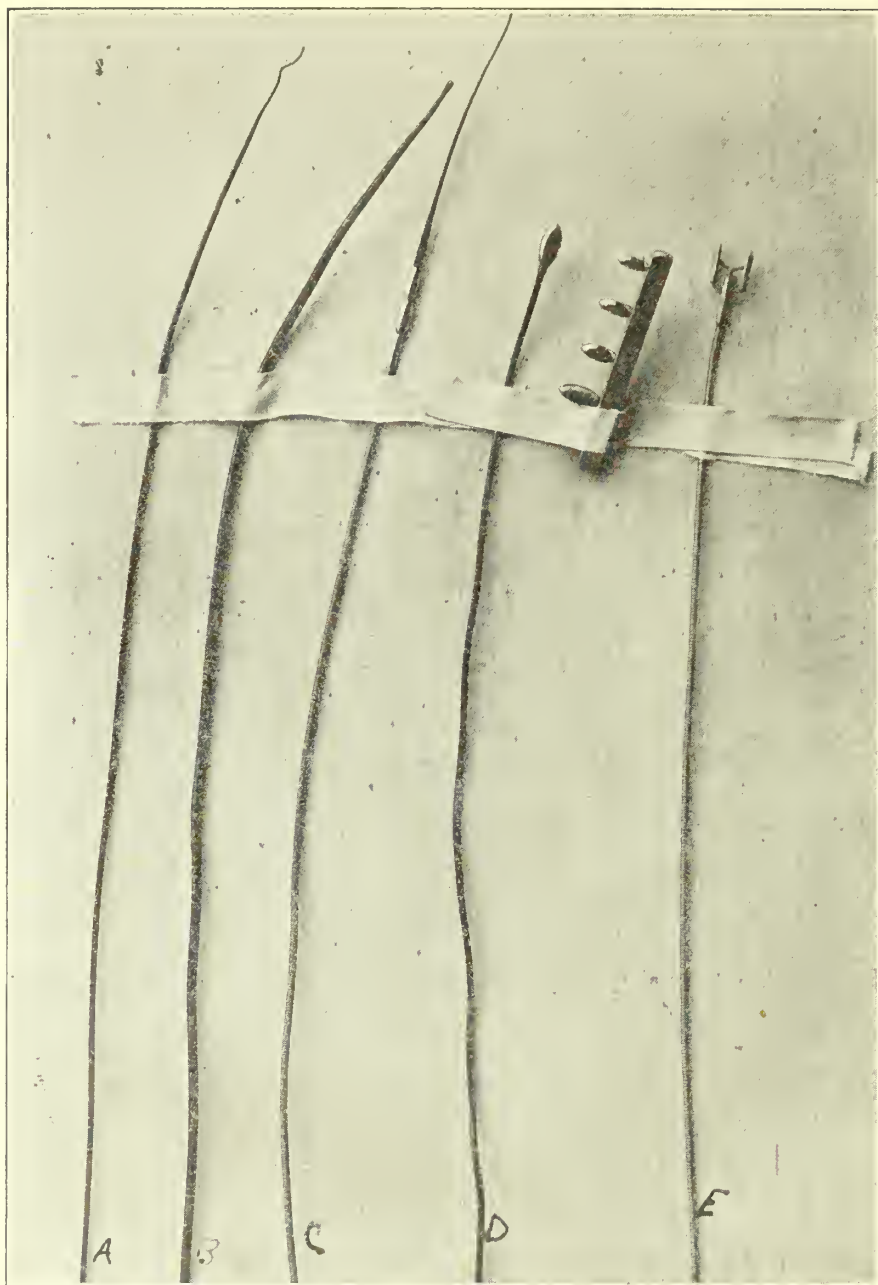


Fig. 7. Instruments for use through the cystoscope. A Spiral filiform tip catheter. B. Plain bougie. C. Walther bougie. D. Buerger olives. E. Lewis dilator.

Considerable difficulty is occasionally experienced in passing the stone with the catheter. To obviate this difficulty I have devised a catheter with a spiral filiform tip, which, if passed into the ureter in a twisting manner, can be inserted past the stones or other forms of ureteral obstruction that are often impassable to the ordinary catheter or bougie. (Fig. 7.)

Dilatation of the ureter with the bougie is

of advantage as a uniform dilatation of the whole ureter is thus obtained. However, in cases of rather large stone it is sometimes desirable to get a relatively large dilatation of the ureter below the stone in order to induce engagement. In those cases the Buerger olives and particularly the Lewis dilator are useful. At times there is a considerable dilatation of the ureter above the stone, and it is often of advantage to insert some device past the stone

with which traction can be made. For this purpose the umbrella catheter devised by Spitzer and the Buerger olives are useful.

As can be seen in Fig. 6, A. the Buerger bulb has pushed the stone upward to the limit of the dilated portion of the ureter. This instrument has been retained in place allowing the stone to descend past the bulb, (Fig. 6. B.) after which traction is made, drawing the bulb outward against the stone. (Fig. 6. C.)

The length of time required for the delivery of the stone is variable and is largely dependent on how persistently the stone remains engaged in the peristaltic movement of the ureter and length of time consumed in passing the narrowed portions.

The stones of small size pass ordinarily after a few manipulations. The stone in Fig. 5, B. was passed after the second sitting in which a catheter had been retained in place for twenty-four hours. Often the stone will be passed after the first dilation of the ureter. The average small stone, however, requires two to eight manipulations, which should be done at intervals of one to two weeks, or according to the tolerance of the patient. The stone in Fig. 2, A. was passed after five manipulations. The larger stones require a longer period of time owing to the fact that a number of dilatations are often necessary before the stone will become engaged in the narrowed portion of the ureter below. When this does occur, however, they often pass with very little distress due to the fact that the ureter has been well dilated and has become tolerant. The stone in Fig. 1, A. was passed through the lower ureter with such slight distress that the patient hardly sensed the occurrence. In this case the stone was passed about eight months after treatment was begun. Usually the stones of fairly large size require treatment at intervals for a period of three to ten months.

Unless the stone is passed early in the course of treatment the capacity of the renal pelvis should be determined, at intervals, as an index to possible damage to the kidney. The blocking of the ureter by a stone is often associated with symptoms of renal infection. The fact that in all probability the stone had previously occupied the renal pelvis is a sufficient factor to account for a latent renal infection, which is quickly rejuvenated with poor ureteral drainage incident to the ureteral block. The retention catheter should be used in this situation. These infections quickly subside with the establishment of drainage. It is quite essential in such instances that free ureteral drainage should be maintained after the stone has been

delivered, whether by cystoscopic manipulation or by open operation. It is my practice to continue the passing of bougies or catheters until the urine is clear, at the same time noting the renal pelvic capacity. In most instances the urine clears rather promptly.

In those cases in which considerable dilatation of the renal pelvis with infection has occurred before the obstruction is relieved, it is doubtful whether a return to normal of the renal pelvic capacity ever occurs, although the urine becomes clear. These cases usually continue to complain of pain. This has been true in both cases in Figs. 5, A. and 1, B. The question arises in such cases as to whether or not a nephrectomy in the beginning would have been the best plan of treatment.

END RESULTS

Finally, in regard to the end results, the principal point to be considered is whether or not damage to the kidney has occurred by reason of the ureteral obstruction. I believe that this is largely dependent on renal damage which has occurred before treatment is begun, whether that treatment is the open operation or cystoscopic manipulation. The open operation removes the stone at once but frequently does not solve the problem of ureteral obstruction, due to the fact that scar tissue formation about and below the stone often results in ureteral narrowing. My observation has been that of the open operation cases symptoms of ureteral obstruction are a frequent sequel unless free ureteral drainage is maintained following operation. While with cystoscopic methods of removal the length of time required would appear on first thought to be productive of renal damage by reason of the comparatively prolonged presence of the stone in the ureter, it must be remembered that with this method of removal the plan of keeping the ureter well dilated provides excellent drainage. And from personal experience I do not believe that further renal damage occurs as a result of ureteral obstruction if the treatment is systematically carried on after it is begun.

CONCLUSIONS

1. The syndrome, called ureteral colic, is not pathognomonic of ureteral stone. It only indicates that there is ureteral obstruction and stone is the cause of obstruction in only approximately twenty-five per cent of the cases.

2. Because a patient complains of colic with or without dysuria and hematuria, and the radiograph shows a suspicious shadow, it does not follow that stone is present. It must be proven by urological diagnostic procedure that the shadow is due to stone in the ureter.

3. Immediate open operation as a routine procedure is to be condemned. A fair percentage of the stones pass unaided. A large percentage can be removed by cystoscopic manipulation. This leaves only a very small percentage in which it is necessary to resort to open operation.

4. It has not been shown that the open operation, as a method of choice, has any advantages over removal by cystoscopic methods in the matter of end results, in which damage to the kidney is concerned; while in a certain percentage of the cases the problem of ureteral obstruction is only partly solved, unless post-operative dilation of the ureter is done.

1334 Rialto Building.

DISCUSSION

DR. BRANSFORD LEWIS, St. Louis: The doctor mentioned the frequency with which renal and ureteral colics come in the absence of stone, although there is severe pain, hematuria, and possibly acidosis. We have found that obstruction at the neck of the bladder, in either man or woman, produces this reflex kidney colic.

DR. CLINTON K SMITH, closing: I wish to express my appreciation to Dr. Lewis, and also to Dr. Burford for showing so many interesting slides in discussing my paper. The thing I wished to emphasize particularly is this: So many of these cases are operated upon for the relief of abdominal pain, either the recurring colicky type or the persistent dull type, without a careful examination, without a careful history, and without X-ray examination. Ordinarily a patient who has had chronic abdominal pain, particularly if there is tenderness over the kidney and abnormal constituents in the urine, is entitled to a complete urological examination; at least these urological lesions ought to be ruled out before operation, except perhaps in cases of real emergency.

UROLOGIC DIAGNOSIS FOR THE GENERAL PRACTITIONER*

BRANSFORD LEWIS, M.D.

ST. LOUIS

In legal parlance, possession is nine points of the law. In medicine I should say that diagnosis is nine points of the problem.

While this may be acknowledged as true by the generality of the profession, there are many who do not make practical use of it. Urinary patients in endless numbers are permitted to suffer for months or years, fed on urinary soothing syrups and placebos under the guise of so-called "treatments," without ever being subjected to a definite examination or securing a diagnosis.

In some quarters there seems to be an impression that an accurate diagnosis in urinary troubles can be based only on elaborate and

technically difficult methods of examination by highly trained investigators. This is a mistake, probably based on lack of familiarity with the real situation. The general practitioner, if he will, can go about the task methodically and develop a diagnosis that may be of untold value to his patient, either saving him directly from prolonged suffering, or guiding him early into lines of procedure that accomplish the same end.

HISTORY OR EXAMINATION, WHICH?

This suggests the question as to which is the more useful for developing a diagnosis in urology, the history of a case or the physical examination. Many practitioners consider an elaborate and exact history and a refined analysis of the symptoms as affording the most valuable evidence on which to base a diagnosis.

While this of course is serviceable and even desirable in complicated cases, an appropriate and comprehensive physical examination, in the estimation of the writer, can disclose more in a few minutes than a history can in a week.

A history is merely a recital of the patient's observations and impressions which may or may not be accurate; while a good physical examination goes to the root of the trouble like a shot to the bull's eye—direct, sure and satisfying, resolving and clarifying a situation that may have been growing more confused and mystifying with the passage of time. By means of the physical examination a so-called "chronic cystitis" is revealed in its true light as a condition secondary to a stone in the bladder, as plain as day to the cystoscopic view; a hematuria is shown to be the mere outward expression of a tumor in the bladder, the discovery and demonstration of which constitutes an imperative demand for prompt and positive action, which may very possibly prevent years of misery and final death.

NECESSITY FOR EXAMINATION

It may be stated as a general rule that any persistent urinary symptom or sign should be methodically investigated and definitely diagnosed both as to its source and nature. A hematuria is no more a disease than a fever; yet it is not unusual to hear of instances in which this sign, so wonderfully valuable as a danger-signal, is ruthlessly suppressed for the time being (just in the early period, perhaps, when its value is the greatest) by the prescribing of internal astringents or hemostatics that if effective postpone the examination and diagnosis which constitute the most crying need under the circumstances.

Inordinate frequency of urination is another

*Read before the sixty-seventh annual meeting Missouri State Medical Association, Springfield, May 6, 7, 8, 1924.

of these expressions of disease for which so-called treatments are permitted and fatuously given for months or longer before providing for a definite examination. The physician who accomplishes the recognition of a tuberculous kidney in the early period of its development is the one who earns his fee and the eternal gratitude of his patient. He provides for the removal from the body of a tuberculous focus that is otherwise destined to shorten life, besides producing a more or less prolonged period of suffering and invalidism. There are few diseases that cause more pain and suffering than urinary tuberculosis.

There are some peculiar traits and habits of urinary tuberculosis that if understood may be utilized to the great advantage of the patient, possibly conserving for him health and long life. "Urinary tuberculosis" practically means, in the earlier periods, tuberculosis of one of the two kidneys. The old idea of "ascending infection" for tuberculosis has been exploded. So that in nearly all cases, the finding of tubercle bacilli in the urine should impel the physician to a definite and prompt study of the question as to which kidney is involved; and when this is determined to supply the life-saving nephrectomy. But one must be careful not to fall into another of the pitfalls of urinary diagnosis in this relationship. Tubercle bacilli in the urine do not necessarily mean urinary tuberculosis or the tuberculous disease of any urinary organ. It may be a filtration of tubercle bacilli from the blood through the kidneys and no urinary tuberculosis whatever. Therefore, before a nephrectomy is done one must secure the definite evidences of disease in the affected kidney, in the form of pus, possibly secondary bacterial infection, physical and functional degeneration, referable to that kidney. A comparison of functional activity of the two kidneys should be of service in this regard.

Another point of great importance is, I do not personally rely on the ability of anyone to differentiate between tubercle and smegma bacilli by microscopic observation alone. I prefer to assist the bacteriologist in his endeavor to avoid error by obtaining the urine in such a way that smegma bacilli are eliminated from the specimen, namely, by careful aseptic and direct urethral catheterization in both males and females. If we take the urine direct from the bladder, or better still, from each ureter by cystoscopy and ureteral catheterization, we avoid the access of acid-fast smegma bacilli that so closely resemble tubercle bacilli.

URINARY OBSTRUCTION

Obstruction to the normal progress of urine down the urinary tract may occur at any point in the whole tract, from external urethral meatus to the kidney pelvis. The causes of obstruction are multifarious. But whatever and wherever it may be it is our duty to locate it and discover its nature and origin. Obstructions come from stricture formation, stones, tumors and growths, cysts, foreign bodies; and in the ureters, from kinks in the tubes or pressure of adhesions or growths outside of them.

Urethral obstructions are demonstrated by bulb sounds (not conical steel sounds) and are comparatively easy of detection. Vesical obstructive factors are observed through the cystoscope and consist mainly of stones, tumors or foreign bodies. But it is the obstructions at the vesical neck that are often most puzzling or difficult of diagnosis. When obstruction at the neck is mentioned, most physicians at once think of hypertrophy of the prostate as being the one and only cause; and if they give any advice to the patient it is usually to the effect that he must have his prostate removed. Or they may be on the other side of the fence and advise the patient to stay away from specialists who undoubtedly will want to jump in and take out his prostate, a very dangerous and reprehensible operation in the estimation of some of our confreres.

I believe that all conservative and conscientious urologists will bear me out in saying that these critical conclusions are unwarranted and unjustified. Aside from the fact that there is never any justification or need for an immediate or "emergency" prostatectomy, it is a fact that many different and varying conditions produce obstruction at the vesical neck other than prostatic hypertrophy. These all require their own individual modes of treatment, many of them not involving operation at all. Hence the necessity of having each case stand on its own merits, as determined by analytical and differential diagnosis.

Simply recalling without discussing them, it may be mentioned that obstructions at the neck are produced by prostatic hypertrophy, contracture at the neck, cyst, cancer, stone, tumor, or congenital valve formation; and that most of these conditions may occur at any period of life, from infancy up. I have seen marked obstructive contractures at the neck, severe enough to require operation, in boys of three years old, and prostatic hypertrophies requiring removal that produced emphatic symptoms as early as 32 years of age. As to the diagnosis of the most common of these obstructive con-

ditions, prostatic hypertrophy, it may be said that the determination merely of the presence of hypertrophied prostate is no diagnosis at all. Many elderly men have hypertrophied prostates but never any obstruction from them and never any bad effects. It's the obstruction that does the damage. We must by examination learn the physical condition and location of the obstructing factor, which is usually hypertrophy or a contracture. In addition to learning whether there is hypertrophy or contracture present in a given prostatic obstruction, we must learn about the physical and functioning condition of the allied organs. If we neglect this part of the diagnosis, we may operate skilfully and scientifically but have a dead patient as a result. Pre-operative diagnosis of functional activities is now proclaimed by urologists to be of vital import in all cases. It has assisted as much as anything else in reducing the mortality of operative work in this line, from its former 50 per cent to its present 5 or 6 per cent. It has led directly to the establishment of preparatory measures for placing the patient in good condition before operating. It has led to the declaration for safety first or no operation.

A chemical and microscopic examination is made of the urine. This naturally gives a line on the physical condition of the kidneys, and forms therefore, an index of their excretion. Their incapacity for work, or functional incompetence, is indicated by the relative amount of poisonous products (blood urea, creatinin, non-protein nitrogen) detected in the blood by laboratory investigation. These form the index of retention and are equally as important as the others for determining renal functional activity. The physical condition and functional activity of the other organs (cardiac system, lungs and intestinal tract) involved are investigated in the usual ways applicable to them and need not be described here. But before any operating is done they must be put in as good a condition of functional activity as is possible, which is the reason for diagnosis as related to them.

Infections in the urinary tract. A diagnosis simply of gonorrheal or non-gonorrheal infection is practically no diagnosis at all. The same requisites of exactitude and completeness are demanded here as they are in respect to obstruction, or hematuria. In addition to determining the kind or nature of the infection, one must determine its location, as to whether it be in the anterior urethra only, or the posterior as well, in the prostatic follicles, the seminal vesicles, or in the upper urinary tract, ureters, kidney pelves, or kidneys, one or both.

These determinations are all within the ability of the methodic and conscientious investigator. The microscope identifies the infectious organism involved, but it must be identified by very exact and dependable methods, not mistaking pseudo-gonococci for real gonococci, nor the reverse. The double glass urine test if properly carried out tells whether the posterior urethra is involved. Palpation and massage of prostate and vesicles gives information as to the condition of those organs, the product of the massage being caught in a butter-platter held under the pendant penis and put through the microscopic investigation.

For determining the location of infections in the urinary tract there are very definite and satisfactory methods. An anterior urethral infection gives a discharge that appears at the external meatus; and when the patient urinates into two clean glasses, the first glass is cloudy (with pus and bacteria) while the second is clear, the external sphincter or "cut-off" muscle having prevented the discharge from going backward and clouding all the urine in the bladder.

In posterior urethritis, both glasses of urine are cloudy. In this case the pus and bacteria developed in the posterior urethra are prevented from going forward by the same cut-off muscle; they therefore go backward into the bladder, clouding all of the urine, making one part as cloudy as another, thus explaining the clouding of both glasses in posterior urethritis. But this does not determine the question as to whether the bladder or upper urinary tract is the source of the cloudy urine in two glasses.

Where there is good reason to suspect the upper tract as being the source, or where there is unreasonable persistence in the pyuria or bacteriuria after good treatment of the lower tract, cystoscopy and double ureteral catheterization are positively indicated, often throwing a flood of light on the situation not supplied by any other means and affording a final solution of the case.

THE UPPER URINARY TRACT

Some of the most difficult problems in urologic diagnosis are met with in affections of the upper tract, in the ureters, the kidney pelves and the kidneys. They relate to colics and recurrent pains that may emanate either from these or other of the abdominal organs, especially the gallbladder and appendix. Many patients have been operated on for appendicitis, only to find later that the same symptoms persisted as before the operation and therefore could not have been from the appendix;

after which further investigation has traced the trouble to the right ureter or kidney.

X-ray shadows of concretions have been observed in which it was very difficult to determine whether they were within the appendix or the right ureter, unless checked up by various methods. And then there is the old problem of differentiating phleboliths and calcareous glands from ureteral stones.

The history of the case must be studied, analyzed and followed up by cystoscopy, ureteral catheterization and X-ray, as pointed out by Schmidt in 1910. If the X-ray shadow is one of a ureteral stone it should be in the line of the ureter, which is exactly indicated by the radiograph catheter that lies in the ureter; but if the shadow is definitely removed from the ureteral line, as indicated by the shadow of the catheter, it stands revealed as something other than a ureteral stone, probably a phlebolith. But just because a shadow is in the line of the ureter, does not prove it to be a ureteral stone. It might be a phlebolith or calcareous gland that just happens to lie in the ureteral line, simulating the appearance of a ureteral stone. Such things have happened more than once, and such patients have been opened for stone with the embarrassing result of finding none.

To avoid this pitfall the writer has developed and carried out the following plan, which has proved successful in a number of cases: When a shadow resembling that of a stone is found in the line of the radiograph catheter, the catheter is withdrawn and a metal ureteral forceps or dilator is introduced into the same ureter. On taking the picture now the shadow will be found definitely removed from the ureteral line, if it is phlebolith, but still in the ureteral line if it is a ureteral stone. The reason is that the more rigid metal instrument straightens out the course of the ureter, removing it from the line of the phlebolith shadow, whereas the catheter is flexible and follows the course of the ureter, wherever it leads, which happens to be in the line of the spurious (phlebolith) shadow. Hence the differentiation is made with ease and certainty.

Small stones do not always show in the X-ray picture. This is particularly true of pure uric acid concretions. So they must be made to show by staining them so they will resist the rays sufficiently to cast a shadow. This is done by injecting 25 per cent argyrol solution through the catheter thus staining the stone and making it visible to the ray.

URETERAL STRICTURES

Strictures of the ureter are as definite a pathological entity as are strictures of the

urethra; and they are just as deserving of recognition and some kind of surgical attention. When located at the ureteral orifice they may be easy of detection and demonstration. The ureteral sound or catheter either fails to enter the channel or does so with more or less difficulty. The passage of the catheter may be obstructed from a similar cause at any point higher up. In some instances the wax tipped bougies of Kelly or the bulbous ureteral bougie may be of service in getting the "jump" as it passes through the strictured channel. But a ureterogram may show the presence of stricture or kink or other cause for narrowing of the channel more strikingly than any other method.

This is sometimes taken with the catheter lying in the lower part of the ureter, the injected medium passing up along the canal and showing by X-ray the exact contour, caliber, and irregularities of the ureter; or if it be found impossible to pass the catheter into the ureter, as happened in one case, the catheter "hanging" at the orifice and invariably failing to go up, then the injection may still be made if the ureteral orifice is open or dilated somewhat, simply by filling the bladder with an appropriate medium (15 per cent solution of sodium iodide) elevating the pelvis and allowing the fluids to run back up the dilated ureter, and in the subsequent X-ray negative show in full detail, any strictures, dilatations or other deformities that may be present.

STONE IN THE KIDNEY PELVIS

The methods of detecting stone in the kidney pelvis are practically the same as those for the ureter, and include X-ray negatives with and without the staining method. Ureterograms and pyelograms are not only useful but are essential in many obscure cases. But they must be carefully and properly applied.

Radiography that is conducted by experts and checked up by the various methods of control (X-ray catheters, semi-rigid bougies, etc.,) is capable of rendering wonderful service for diagnosis in urology. On the other hand, if carried out in a haphazard way and without the necessary controls, it may be entirely misleading and worse than useless. It is efficient as a servant but dangerous as a toy.

REFLEX URETERAL AND RENAL COLICS

During the past ten years the writer has observed a number of instances in which severe ureteral or renal colic, closely simulating that of stone, has occurred apparently as a direct result of obstruction at the vesical neck. This phenomenon has occurred in both males and females. The advantage in recognizing this

relationship consists in the prompt relief and happy outcome of treatment supplied on that basis. The first case in which this was observed was that of a physician who came in 1913 from Dallas, Texas. With him the colics were typical in recurrence and severity and simulated those of stone in the right ureter; and the hypothesis of stone was fortified by radiograms apparently showing shadows in the right ureter low down. But X-rays taken with ureteral catheters in place showed the shadows to be outside the ureter and therefore no stone; while dilatings and irrigations relieved the marked tendency to contraction and obstruction at the neck and relieved all reflex symptoms.

Another (male) patient at Granite City, Illinois, was marching and playing an instrument in a band in October, 1920, when he suddenly had to fall out of line and receive emergency treatment (hypodermics of morphine, hot applications, etc.) for very severe colic that began in his right kidney and ran down along the course of the ureter and into the right testis. From the typical symptoms presenting a diagnosis of ureteral stone was made by the consultants in attendance, after which he was referred to my care. In the course of our investigation we found there had been no complaint of impediment to urination, which the patient claimed had been free and satisfactory; nevertheless we found seven ounces of residual urine constantly present until it was reduced by the regular use of the Kollman dilator; and in the meantime ureteral stone was excluded by ureteral catheterization and radiography. Further use of the dilatings removed the evident obstruction at the neck (contracture) and also prevented the recurrence of ureteral or renal colic. There has been no recurrence now in four years.

Equally as typical instances of reflex ureteral colic have been observed in women, followed by prompt and lasting relief on the application of dilatings and irrigations of the contracted urethras. The writer has been loath to believe in the reality of this reflex symptom and has only become convinced by its repetition and reiteration in numerous instances; and he therefore feels justified in now calling attention to it.

550 Century Bldg.

DISCUSSION

DR. CLINTON K. SMITH, Kansas City: I appreciated Doctor Lewis's paper very much. I think it is timely. I believe there has been an impression going around in the last few years in the general profession, that if there is a urinary lesion there is no use for the general man even to consider it; that is a mistake. As urologists we go about making diag-

noses in these cases largely in the same way that the general man could do it. We do not begin with shoving a cystoscope into a man's bladder the first thing. When a man comes in with a urinary disturbance we examine his prostate and vesicles by rectal palpation. Any general practitioner can put his finger into a patient's rectum and determine the condition of the prostate as far as it can be determined by palpation; but how often is that done? In cases of prostatic cancer, we do not get a chance to see them until they are far advanced, but if somebody had put his finger on these prostates when the patient first called for examination a diagnosis could have been made and something probably could have been done. Any practitioner can determine whether a patient is carrying residual urine by putting a catheter into his bladder after he urinates. Any practitioner can determine whether he is dealing with stricture of the female urethra by using ordinary sounds and bulbs. A great many bladder tumors with hematuria would be diagnosed if practitioners would only preserve the urine and examine it repeatedly for the elements of the tumor.

I wish to emphasize the idea that Doctor Lewis brought out, that the general practitioner can make use of the general principles of medical examination and apply microscopical tests in his own office and get a correct lead as to the cause of his patient's trouble.

DR. BRANSFORD LEWIS, closing: Doctor Smith has expressed the central idea of my paper possibly better than I have—that if the general practitioner will do his duty in having thorough examination made early he may save the life of many a patient that goes on into the cancer stage, or into the later stage where the kidneys are destroyed; and he can do that if he will only start the ball rolling for diagnosis rather than by giving treatments for three or four years without examination. That is the central, pivotal idea of the paper.

ECLAMPTIC AND NEPHRITIC TOXEMIAS IN LATE PREGNANCY*

G. V. FEIST, M.D., V. HYSLOP, M.D., AND
P. Z. ALAVA, M.D.

From Department of Obstetrics, Washington University School of Medicine

ST. LOUIS

It has been the impression in this locality (St. Louis) that no fairly standard method of treating eclampsia and allied toxemias exists, and that the general tendency has been rather toward radical forms of treatment and that conservative methods are usually employed in an accessory way. Perhaps it may be well to say that radical treatment in the last two or three years has been slightly less prominent and conservative treatment is coming more and more to the foreground. We thought it would be of interest to go over the records of the cases of toxemias of pregnancy, that is, those which are either eclamptic or nephritic toxemias, in the Barnes Hospital and in the service of the Washington University School

*Read by Dr. Feist at the meeting of the Jackson County Medical Society, Kansas City Mo., March 18, 1924.

of Medicine for the past eleven years. Although a comparatively small number of cases have been observed we felt that emphasis as regards the various ways in which these patients have been handled would serve to indicate that no hard and fast rules have been set, and that the patients were rather given individual consideration, as the physician in charge might deem best. At the present time the head of this service is inclined to treat all such patients conservatively as he has been thoroughly impressed with the results obtained, particularly in Dublin, by conservative methods and that more radical treatment should therefore be only occasionally considered.

A recent survey in England made under the auspices of the British Association of Obstetricians and Gynecologists has been, indeed, a very illuminating piece of work and we venture to say that if a similar survey were made in this country the same conditions would be found with the exception that possibly no institution could boast of such excellent results and such standard methods as the Rotunda Hospital of Dublin. It may be well to mention here the chief features of this English survey and mention the recommendations that the findings brought forth.

The report of the committee was based on the study of 2,055 cases which occurred during the last ten years, with a mean mortality of $22\frac{1}{2}$ per cent. London, Edinburgh, Dublin, North of England and Midland were included and in each instance the percentage of mortality was between 21 and 25 per cent, with the exception of Dublin, where the mortality rate was only 10 per cent, and it is explained that this is the outcome of special methods of treatment that have been consistently used there. Eden, who summarized this study, states that clinical work of the future will probably not be individual but collective. Too long, he mentions, has medicine in all its branches been dominated to its undoing by the clinical individualist and by one who having convinced himself all too readily of the value of some method of diagnosis or some line of treatment, be it operative or non-operative, devotes himself to the task of gaining the ear of the profession. He further states that too often the basis of his convictions are quite inadequate, and having been lead far astray we have carefully to find our way back to the path from which the enthusiast mislead us.

In classifying the severity of the cases the London Committee considered the following seven phenomena: A pulse rate of 120, a temperature above 103, a number of fits greater than ten, a urine which becomes solid on boil-

ing, the absence of oedema and a blood pressure over 200 mm. When a patient exhibits any two of the above phenomena the case is considered a severe one. In grouping our series we followed fairly closely this classification of mild and severe cases. As regards the material mortality under various forms of treatment, very impressive figures are given to the very definite detriment of radical interference.

	Maternal Mortality (Eden)	
	Mild. Per cent	Severe. Per cent
A. Natural Delivery.....	4½	36.9
B. Assisted Delivery.....	5.6	31.7
C. Induction	6.6	26.4
D. Cesarean Section.....	11.3	46.3
E. Accouchement Force....	18.1	63.1

In consideration of this table Eden states that these results constitute a very powerful plea for conservatism in obstetrical management in cases of eclampsia. Active interference as represented by Cesarean section and forcible dilatation of the cervix diminishes the patient's chances of recovery instead of increasing them. As a result of this survey Eden makes the following recommendations which we shall mention here in abstract:

1. It is easier to prevent eclampsia than to cure it. Prophylaxis is, therefore, all important. In eighty-four per cent of the cases premonitory symptoms were present.

2. A case of eclampsia is not a case for domiciliary treatment. Prompt removal to the hospital is the first indication after a fit has occurred.

3. A similar classification of cases into mild and severe upon the lines indicated would facilitate treatment and make clinical records of much greater value.

4. All cases of eclampsia, whether mild or severe, are best treated with the minimum of obstetrical interference.

5. Simple medical treatment, carefully regulated and closely watched, gives the best results.

He states that the lines laid down by Stroganoff and Hastings Tweedy are those which should be followed, but mentions that the last word has not yet been spoken by either of these distinguished clinicians. He states that we are greatly indebted to them for the lead they have given us and we could not pay them a better compliment than by trying to improve upon their work.

As regards eclampsia and its management throughout this country, we thought it might be of interest to go over the American Literature during the past fifteen years, and although there are quite a few series reported, the work

of McPherson at the New York Lying-in Hospital stands out most prominently. McPherson, in 1909, reported a very interesting series of two hundred and fifty hospital cases occurring at the New York Lying-in Hospital. In this series he observed that primiparae were subject to the disease in 64.4 per cent of the cases and multiparae in 35.6 per cent. The greatest number of cases occurred between twenty and twenty-five years of age. There was a total of maternal and fetal mortality of 30.8 per cent and 44 per cent, respectively. In the 250 cases delivery was effected in the following ways: Internal podalic version, 89; forceps, 48; craniotomy, 14; abdominal Cesarean section, 10; vaginal Cesarean section, 2; induction by bags, 7; and spontaneous delivery in 79. In general this treatment was radical, it being his belief that the emptying of the uterus early was the best plan. However, he combined with these methods the usual eliminative procedures.

Another series was published by McPherson in 1918. He summed up two and one-half years' experience with eclampsia and reported his findings in sixty-seven cases. He found a maternal mortality of 10.5 per cent and a fetal mortality of 28 per cent. In this series it is interesting to note that he handled his cases in a conservative way, in marked contrast to his previous report of 1909. He changes his form of treatment with a great deal of skepticism since he had been brought up to consider the two words, eclampsia and operation, inseparable. He concluded from the study of this series that conservative treatment was a real contribution to obstetrical progress and hoped that radically inclined obstetricians would give it a trial.

In Kosmak's monograph on toxemia of pregnancy he mentions an unpublished article by McPherson, following out the latter's conservative trend of treatment. In his series there were one hundred and four cases with seventeen maternal deaths, a mortality of 16 per cent. However, seven of these cases were more or less in a hopeless condition at the time of admission and omitting the latter the maternal mortality would be only 9.6 per cent. The stillbirth mortality was 25 per cent. These figures are therefore practically identical with those reported by him in 1918 and he contrasts these with his 1918 results with the much higher mortality rate that was shown in his report in 1909. It might be added that McPherson's report shows the lowest mortality rate that has ever been reported in this country and we know of no other large series of cases that have been reported which show similar

results, or have been treated in a conservative manner.

Since accumulating the data for this paper the fifth edition of Williams' textbook has appeared in which there have been many marked changes and particularly in the chapter which concerns the toxemias of pregnancy. As regards treatment of eclampsia, etc., a very interesting table is shown in which 110 cases were treated radically, with a maternal mortality of 22 per cent, and 115 cases with a maternal mortality of 14.8 per cent which were treated conservatively. He states that twenty years ago delivery was effected at almost any cost and great emphasis was put upon the efficacy of sweating, administration of salt solution subcutaneously, and venesection was employed as a last resort. He asks the question, "Why have we changed?" He points out that forced delivery was occasionally the direct cause of the death of the mother and that it did not seem rational to subject a sick woman to the radical operative procedure until assured of its necessity. The results of Stroganoff made him take stock in what he was doing. The hot pack was abandoned because on chemical analysis of the sweat it was shown that it consisted practically of water. He had abandoned the use of subcutaneous saline infusions chiefly on account of the sodium chloride retention in the body, and secondly, because glucose solutions act just as effectively as a diuretic and proves of additional advantage in that it enables him to introduce into the patient small amount of easily assimilable food stuff. He emphasizes that venesection, if it is to be efficacious, should be carried out in considerable amounts and recommends the withdrawal of 1000 c.c. of blood, or at least a sufficient amount to have the blood pressure fall to 100 mm. He calls attention to Eden's analysis of the British cases and states that the sooner the obstetricians and surgeons recognize the fact that difficult operative procedures cause definitely an increased mortality, the better it will be for the patients.

During the past eleven years there have been sixty-eight admissions of eclamptic and nephritic toxemia cases in Barnes Hospital and Washington University Hospital. The years included in this review are from 1912 to 1922 inclusive. Of these sixty-eight cases, thirty-two had convulsions; the remaining cases carried blood pressures of 150 or higher and albumin was present. From the classification of the English committee we classified as mild forty-eight cases, and twenty cases as severe. In the mild cases there was only one

death and in the severe cases there were eight deaths. In the mild cases the blood pressure ranged from 140 to 260. There were three cases between 140-150, two between 150-160, eleven between 160-170, ten between 170-180, nine between 180-190, one between 190-200 and twelve over 200, and of these, sixteen cases had convulsions. From the blood pressures and the incidence of convulsions it would indicate that many of these were rather severe types of toxemia, but under the English classification they must be put in the mild group.

Of the twenty cases that were regarded as severe sixteen had convulsions. The maternal mortality in the severe cases was 40 per cent and in the mild cases 2.1 per cent, and for the entire series 6.1 per cent. As a whole the series was handled in a more conservative than a radical way, with induction of labor in 15 instances, in four instances Bossi dilator was used to dilate the cervix and in two instances the cervix was dilated manually and in two instances vaginal hysterotomy was performed. In the eight cases which were treated radically there was one maternal death. We attach no significance to this chiefly from the fact that the numbers are so few, although the cases were all rather severe in type. There were twenty-seven cases of spontaneous delivery, of which twenty were in the mild class; low forceps was resorted to in twelve instances, of which ten were in the mild class; mid forceps were used in four instances, two of which were in the mild class; there were six high forceps, of which four were in the mild class; there were six breech deliveries, four of which were spontaneous, three of which were in the mild class; there were three cases, all mild, that were terminated by podalic version and five cases entered post-partum and three did not deliver.

In the severe cases there were four fetal deaths of which three were 32 weeks gestation. There were seventeen stillbirths, thirteen in the mild cases and four in the severe. Of these seventeen stillbirths nine were under 36 weeks gestation. In the series there were sixty cases delivered in the hospital, with seventeen fetal deaths, giving a fetal mortality of 28 per cent. Subtracting nine fetal deaths which were from cases of less than 36 weeks gestation, gives eight fetal deaths in fifty-one cases, a fetal mortality of 16 per cent, which indicates very favorable results as regards fetal mortality. The close study of this series will readily bring out the fact that the tendency of the series was toward conservative treatment, while in the severe cases radical procedures seem to have played a great part. No constant methods seem to have been followed and al-

though there were but few private patients it seems that radical treatment was instituted in these cases much more quickly than in those in the ward.

In connection with these operative procedures a considerable amount of conservative treatment was carried out. This consisted chiefly of restricted diet, forced liquids (both per rectum and under the skin), saline purges, sweating and venesection. Venesection was employed in sixty-three cases, varying from 250 to 500 c.c., chiefly the first portion. *Vera-trum viride* was only used in two instances. The fluid was chiefly saline subcutaneously, a procedure which we would not advocate at the present writing in all cases. In the edematous patients we recommend the use of glucose intravenously and through the nasal tube, and isotonic glucose subcutaneously. In patients who are not edematous, which in our experience have proved rather severe in type, we would not hesitate to use saline subcutaneously with the glucose. In fact, cases of eclampsia recently treated show this lack of edema to be due definitely to dehydration. The chloride content of the blood in these cases was also normal. Morphine was, of course, used freely, but not to the degree that it is used by Stroganoff.

The conclusions arrived at from the review of these cases is that there has been no systematic line of treatment, due chiefly to the lack of uniformity of opinion by those managing the individual cases; second, although there is a tendency to some form of conservative treatment, these measures vary much in manner as regards the individual case.

Although the series is small and although the statistical results are fairly good except in those classed as severe cases, and although where radical measures were used the results were better than figures usually given for radical procedures, we are now following a much more conservative line of treatment. We believe that the routine for conservative measures has by no means been definitely established. To control the convulsions it would appear that the use of morphine and chloral as outlined by Stroganoff is the most efficacious method. In the Dublin method we consider the gastric and bowel lavage as most important and this should be carried out as this method describes. As regards the injection of sodium bicarbonate solution, also saline solution, we feel that these preparations will be displaced by others. This has been particularly emphasized recently by Williams, who, although he used large amounts of saline subcutaneously in his cases quite successfully, feels that on account of the sodium chloride

retention in the body it should be substituted by the use of glucose, which in large amounts acts not only as a diuretic, but will furnish a substance easily assimilable and of nutritional value. Sodium bicarbonate solutions seem less indicated because most cases are only in a state of mild acidosis and, therefore, sufficient sodium bicarbonate can be injected intravenously in addition to the glucose.

The indication for venesection may also be disputed although it has given in some hands very good results. We feel now that delivery in eclamptic and nephritic toxemias, due to a somewhat disturbed circulatory system causes shock quite readily and the withdrawal of a large amount of blood preceding delivery is not a logical procedure while we have this in mind. Drops in blood pressure following delivery of such toxic cases we feel would be very serious in those cases in which blood pressure has been dropped by venesection during the period of conservative treatment before labor has been terminated. We hold the same opinion as regards the use of *veratrum viride*.

Dr. McNailey, of our service, is at present developing a method of giving these patients fluid and glucose solutions by mouth through a nasal tube which is allowed to remain in place over a period of from twenty-four to forty-eight hours, and injecting fluid in small amounts frequently, according to the ability of the stomach to empty itself. This, we feel, may prove a very valuable method of giving fluid to these patients. He employs the tube after the stomach has been thoroughly washed out and a large dose of $MgSO_4$ has been given, by mouth.

Dr. E. Lee Dorsett has recently reported a series of eleven severe eclamptic cases with one death, in which he has used Mag. Sulph., along with conservative treatment and induction of labor. He has used the drug in 15 c.c. doses of 25 per cent solution subcutaneously, and has been able to effectively control the convulsions in most of his cases. He, however, warns those using this drug as being very powerful and he believes that results can be obtained by giving very much smaller doses and repeating them if necessary. We are watching this work with much interest and feel that it may prove valuable, but also may be very dangerous if not used intelligently. We have used magnesium sulphate in several cases since in much smaller doses and quite successfully—5 c.c. injections of 25 per cent solution into the muscle repeated at forty-five minute intervals, three to four injections being a maximum. Where it has been used in these doses no marked changes in respiration were observed, although the convulsions were well controlled.

This we feel is an advantage over morphine, with marked slowing of respiration in patients who already are in a state of moderate acidosis. However, the acidosis resulting from retained CO_2 , due to decreased respiration during morphine treatment, must be partly compensated for by alkali freed by the disappearing lactic acid after convulsions have ceased. This may in part account for the good results obtained by Stroganoff in his morphine treatment, during which serious acidosis apparently seldom arises.

SAFETY PINS IN FOOD AND AIR PASSAGES; REPORT OF TWO CASES; REMOVAL, RECOVERY

E. LEE MYERS, M.D.

ST. LOUIS

Of all the objects the human family are apt to put into the mouth and accidentally swallow or aspirate, the safety pin will strike terror into the heart of any of the profession who attempt its removal.

Invariably the safety pin will be found with the point up. The reason for this unfortunate position is unquestionably due to the following factors: 1. The weight of the curl of the spring. 2. If the pointed spring end goes downward first, it will catch and if plenty of room is had for the pin to rotate the point will trail and allow the pin to go downward, this applies especially to the esophagus, al-



Fig. 1. Open safety pin in right lung; point up. Removed by bronchoscopic methods.

though the pin will rotate in the trachea. 3. Pins are put in the mouth in a point forward position; i. e., the curl being to the back of the mouth and the point and hooded end are forward, which is in a large measure responsible for the point being upward in the safety pin cases.

In reviewing the literature hurriedly I have found record of seventy-one safety pins, thirty-three of them being in the air passages. In twelve of these latter cases the pins were in the lower air passages, the right lung being favored in the proportion of seven to five.

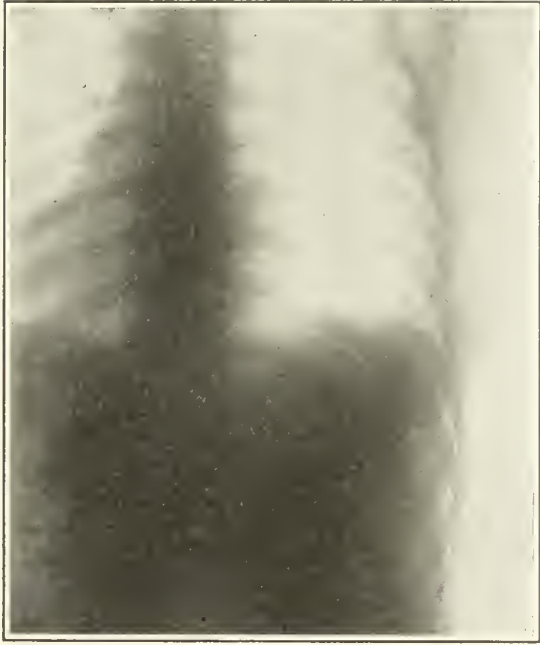


Fig. 2. Two safety pins in esophagus. Removed by suspension.

The mechanics of removal. The use of the bristle probang is mentioned only to be condemned. The point of the pin being upward in the majority of cases, the probang will surely pull the pointed end into the tissues and death may follow shortly.

Closing the open pin. This has been done in the trachea and esophagus but is almost an unsurmountable problem when the pin is in a small and terminal bronchi. Jackson and Makuen are notable in their safety pin closing cases, but the majority of the cases reported were handled by getting the point of the pin in the tube after the method of Jackson and later modified by his associate Tucker.

In two cases in the Jackson series the pin was straightened at the tube mouth, as was done in the case about to be reported.

Cutting the pin after Casselberry's method.

No mention of any cases can be found, although this method could be used after the simpler methods have failed, the pin being taken out in two pieces.

Bending of the point inward towards the keeper has been done once by Jackson; this renders the point harmless. This is usually difficult as the pin is tempered to a spring temper and does not bend well in the majority of cases.

Jackson's method of doing a version, as he has done a number of times in the esophagus and trachea, is a method well worthy of a trial if the pin can be turned; however, in a lower bronchus, in the hands of the majority it will be impossible. The esophageal pin is pushed into the stomach and grasped by the curl and closed as it comes upward in the tube. The same method can be used in a tracheal safety pin point-upward.

Other methods of closure are used, such as Bruning, Hubbard, Mosher, Arrowsmith and others. It is not the purpose of this paper to exhaust the literature in this respect.

Symptoms. Painful or uncomfortable swallowing or both, regurgitation of food sometimes, sticking sensations in swallowing may or may not be present if the pin is in the food passages. Usually the pin will cause no symptoms other than regurgitation of food, the child telling nothing.

The natural inference would be that a foreign body in the lung such as a safety pin would be accompanied by violent coughing spells and probably bloody sputum. The presence of a wheeze (asthmatoïd) was brought out by Jackson, as is seen in watermelon seeds, corn and peanut kernels. If the metallic substance is anchored a wheeze will not be discernible, and if so will need careful examination.

Jackson states that a fixed foreign body causes very little cough, while a movable one causes great cough. He proves this by citing that the use of a bronchoscope will excite cough at each new place that the scope touches, but after a while a tolerance occurs.

Metallic substances aspirated are apt to have symptomless intervals until signs of pulmonary involvement have occurred, such as night sweats, fever, emaciation, clubbed fingers, loss of weight, etc.

In all cases under suspicion for a foreign body, it is well to X-ray the chest in quarter-lateral position as an anterior-posterior or a straight lateral position may not show the intruder, yet a quartering of the lateral will bring it out.

DIFFERENTIATION OF ESOPHAGEAL AND TRACHEOBRONCHIAL FOREIGN BODIES

The roentgenologist, whose services are invaluable in this work, will tell you that if in an anterior-posterior X-ray a safety pin is seen lying in a position from IX to III or thereabouts, it is reasonable to assume that the pin is in the food passages, but if in the same X-ray position a pin is seen in the plane of XII to VI or thereabouts it points conclusively to the larynx or trachea. Of course lower down in the chest the pin may be turned around and there you would have to call to your aid other topographical factors, such as heart shadow, the normal position of esophagus, etc.

REPORT OF CASES

Case 1. B. D., 15 year old girl, referred to me by Dr. Hudson Talbott, to whom the case was referred by a capable surgeon in an outlying community. It was seen by him roentgenologically in a plane that suggested that it was esophageal; however, in an attempt to remove it, he noticed that the esophagus was empty and he did not open it. The case was later taken to the Missouri Baptist Sanitarium and the accompanying X-ray by Dr. Klinefelter shows the pin to be in the right lung at about the origin of the middle lobe bronchus. As will be noticed the point is upward and to the outside of the body; also the pin is dangerously near to the great vessels of the mediastinum. The nicking of the pulmonary vein or opening up of the pleura in instrumentation is a hazard to be thought of in contemplating the removal of the pin.

This child was dressing her younger brother and while laughing and talking felt the pin slip downward, felt a slight pain in the throat, which immediately became as if nothing had happened. Up to the time that Dr. Talbott and I saw the child there had been no cough or bloody sputum. The child spoke of a feeling that she would like to cough, but suppressed it. A wheezing respiration was noted by the mother, but not by any of the medical attendants. The sojourn of the pin was three and two-thirds days in the right main stem bronchi up to time of removal.

The X-rays of the child previous to coming to St. Louis were unobtainable. The patient was anesthetized in an exaggerated Trendelenberg position, for fear that the pin would go lower in the lung. Considerable time was lost in the introduction of the scope because of a rather thick neck, which makes bronchoscopy very difficult. The pin was found with but little difficulty in the region of the middle lobe bronchus, and in an effort to find the point of the pin, it was purposely pushed further downward to free the impacting point; however, at each disimpaction a cough would reimpact the pin. Under complete anesthesia the pin was brought up to its former location (at middle lobe bronchus) and here another effort was made to seize the point, but was unsuccessful. Another method of removal was possible, i. e., the straightening of the pin at the tube-mouth. This is possible only with a small pin. This was successfully done. The actual working time in the removal of the pin was 20 minutes. Her recovery was marked by the absence of any untoward symptoms.

One can only theorize why the point of the pin could not be found. I think the point was in the lung tissue. In two cases in literature, the pin was removed in approximately the same manner. In one case the point was brought into the tube and the entire pin straightened in the tube, the spring had caught in an upper lobe bronchus, and in the other the hooded end was drawn into the tube, as it was in this case, and pin removed. These three cases are the only cases that I can find that the removal of the pin was accomplished in this manner.

Had the point of the pin been toward the medias-



Fig. 3. After removal of pin.

tinum, I would have hesitated and made another attempt using more orthodoxy, even at the risk of not removing the pin.

Case 2. Baby G., 11 months old, son of a physician, while playing on the floor swallowed two open safety pins. The X-ray by Dr. Gray C. Briggs showed them plainly in the hypopharynx. The child was removed to St. Luke's Hospital anesthetized and under suspension laryngoscopy, using Lynah's bivalve speculum, the first pin was removed by Dr. L. K. Guggenheim, the second pin being removed by the writer. Neither of the pins gave us any trouble. Apparently no damage was done to the esophageal mucosa as an uneventful recovery was had.

In the light of present knowledge, this case being an early case (1919), Jackson's esophageal speculum would have been equally as helpful in the removal of both pins.

CONCLUSION

Unless dyspnea is present, sufficient time is had for counsel in safety pin cases. The problem should be well worked up preferably on an anesthetized dog. No amount of practice on human beings will develop the safety pin prob-

lein as it is a veritable night-mare at the best.

The removal of the safety pin by surgical methods should be considered only after two expert "tube" men have failed. The proper use of the tube is not surrounded with any great danger; in fact it is a minor procedure, if damage to the tissues can be prevented by careful work.

207 Wall Bldg.

A LESSON FROM THE CULTS*

M. L. CLINT, M.D.

BRECKENRIDGE, MO.

In the early part of the year 1922 an investigation was conducted in Chicago under the supervision of Dr. James H. Hutton, the object of which was to find out what the people are thinking about the medical profession.

In and out of the city of Chicago from all walks of life 6,772 people were interviewed. Their tabulated replies are both enlightening and disillusioning. In these replies there is certainly food for thought.

Among things that every doctor knows is the fact that there has been a tremendous falling away of patients who have resorted to various quacks, pseudo-cults, and manipulators. It cannot be denied that these isms have gained an important following and that this following is gathered from former patients of our profession.

There is no sense or profit in longer attempting to minimize or ignore this situation or to brush it aside with ridicule. We are confronted with a situation that is a menace not to ourselves only, but to the general public as well. And the only chance that this menace can be averted is through action by the medical profession.

If the average business man should suddenly see his business falling off, his customers not only failing to patronize him, but going right before his eyes to patronize others who sold shoddy and inferior goods at higher prices, that business man would come to life and get busy. He would inaugurate a trade survey to discover in what particular his methods, services, and goods were lacking.

That is what was done in Chicago by Dr. Hutton to find out what is the matter with our profession. Using welfare workers, salesmen and women, club women, teachers, nurses, etc., a crew of investigators was organized who went out into the highways and byways and asked the public this question, "What did you do the last time you were sick?"

Of the 6,772 questioned only 931, or about 13 per cent, had never dabbled with any cult. Of the remaining 5,841, only 7 per cent were opposed to the doctor on account of some deficiency of his own, such as malpractice or a failure in his power of adaptability. Ninety-three per cent, however, and here is the meat of the cocoanut, had such confused impressions of doctors, of their scientific progress and methods, of their position in the state and in society, that they simply drifted elsewhere because they had no way of knowing how to distinguish the genuine from the spurious. Being in dense ignorance in matters affecting health and disease, they are at the mercy of every charlatan and pretender who is vicious enough to prey upon them. And the medical profession in foolish self-complacence has stood by and seen this thing happen and has been too "ethical" and too dignified even to make remonstrance.

It should be emphasized that those interviewed were not from just one walk of life but that all social elements were reached. It included besides laborers and the so-called lower classes, society folks, lawyers, teachers, bankers, merchants, etc. Had this showing been made by the lower class only, we might have been able to impute the result to the ground of general ignorance; but when the highly educated show no greater discriminative ability, then indeed it is time for us to begin setting our house in order. This leaves us no further excuse to emulate the well known ostrich.

Of course many of the replies contained statements that were ludicrous, ridiculous, preposterous, plausible lies usually, though mixed with a leaven of half-truth; but that is beside the issue. What the investigation sought to determine was, what the people thought, not what is the truth.

What then do the 6,772 say about us? What is their honest opinion?

In the first place they say that we are negative, that we tell them what not to do, while the cultists give them positive directions as to things they may or should do; they think the reaction is better from positive suggestions.

They say that we resent questions, that when asked about a case by those properly interested, we either shut up like a clam or overwhelm them with an explanation that is couched in language so abstruse and technical that it leaves their ignorance worse confused.

They say that we are pompous and over-dignified, that we feel that we are wiser and less fallible than ordinary folks.

They say that the attitude of a doctor toward his predecessor is far from eulogistic

*Read before the Caldwell County Medical Society.

and complimentary, that when called after another physician has failed we sniff the bottle and exclaim, "It's lucky you sent for me when you did!" Again some say just the opposite, that if another doctor has been called and has blundered in the case, we are careful to protect him and will do absolutely nothing to prevent him from repeating the performance on any poor patient that may stray into his office.

Some say that doctors habitually criticise treatments and methods of which they know nothing, that we should sample the chiropractors' wares before assuming to condemn them. Some said they preferred the cultist because he gave them something to do, because he actually did something with them and for them, and made them feel that he was interested and concerned in them as individuals and did not consider them mere "cases."

A considerable number feel that there are too many specialists, that it is too expensive to be handed around from one specialist to another for each separate thing that might be the matter. It seems better to go to someone who can take care of everything at once.

Hundreds admitted they had gone to the cults because of advertisements they had read. Finally there was a large group who stated that there is no way of telling which is the good doctor and which the poor one, so they rather naturally drifted to the one who is most aggressive and has most to say for himself.

The striking thing revealed in these answers and in others that manifest even less intelligence, is the dense and impenetrable fog of ignorance in which our people live in so far as matters affecting their own health and the status of our profession are concerned.

In this darkness of ignorance lies the imminent germ of disaster and danger to our profession and its imperiled future to the people themselves.

Lack of knowledge has been made worse through the persistent sowing and scattering of false and misleading information by the aggressive cults. The man who is ignorant and has sense enough to know it and is honest enough to admit it constitutes no great menace to the public welfare. It is the man who on some flimsy basis of half-baked theory thinks or pretends to think he is a safe counselor who is the menace of the present situation. Some way, and soon, we must get the truth about our profession over to the people for their protection as well as our own.

For some 25 or more years the profession has maintained an organization, the American Medical Association, called by patent medicine buzzards, the quacks, and the cultists, "the medical trust." In its purposes and practices this

organization is almost purely altruistic. It has never sought to exploit the public for the benefit of its members, but rather to prevent such exploitation by its members or by anyone else. Its chief efforts have been devoted to building up a high standard of ethics and professional qualifications in its membership and to favor and foster laws and regulations for the suppression and eradication of communicable disease.

In the laudable endeavor to raise the qualifications of its members premedical educational requirements have been steadily advanced until now many of the states and all Class A medical schools are demanding two years of approved college work in addition to graduation from a four-year high school as a minimum preliminary to taking up Freshman medicine. The low grade medical schools with their makeshift faculties and inferior equipment, with their abbreviated courses of study and their easily acquired diplomas have been largely weeded out. This can be said with confidence in spite of the recent disclosures in the press of the fraudulent procurement in this state of diplomas that were made use of before the examining boards of Connecticut and Arkansas.

Every member of this society knows how during his lifetime and the period of his professional experience the incidence of infectious disease has shown a steady and gratifying decline, how the poisonous tropics have been opened to commerce and progress, due to the faithful spirit of service and the scientific achievements of reputable physicians. In the same period the general average of longevity has shown a steady rise, largely, if not altogether, from the same cause. Doctors have worked loyally and faithfully, in many instances sacrificing their own welfare and even their own lives, to improve sanitary conditions and to acquire that knowledge which is slowly giving us the mastery over disease. Doctors have done these things usually without reward or appreciation, and often in the face of opposition and contumely.

All of this is fine and splendid and, perhaps, as it should be. But while this great work of elevation of professional standards and of public benefaction has been going on, while these efforts have been showing results in improved public health and in greater individual efficiency, while high altruistic principles have in the main dominated the Association and the profession—at this same time events outside the profession have come to pass which, as has been shown, threaten to negative and defeat the ideals and ends toward which we have striven.

What shall it profit us to make an end of low grade medical schools and refuse to license the graduates of such if, for every such school that has been suppressed there spring up, like Jonah's gourd, ten new schools of osteopathy and chiropractic to take its place and spawn their parasites upon society? What shall it profit us to suppress the scum of our own diploma mills, if thousands of ill-trained and low bred birds of prey are being turned loose yearly by the cult schools to practice either with or without a license that is meaningless if they have it?

And what will become of the real progress that has been made in the science of hygiene and in the healing art, if the medical profession finally goes down under this pressure of shoddy competition? Why should a boy spend 12 or more years to go through high school, college, medical school, and take hospital training when, if he has finished the primary department of the grade schools and can sign his name he can by taking a two weeks mail order course become a full-fledged Doctor of Chiropractic with "all the emoluments, privileges and immunities appertaining thereunto" as the gorgeous diploma has it?

The tendency of the osteopathic and chiropractic cults, like that of the medical diploma mills, is to make their so-called professions a short cut to the practice of medicine. All of them, practically, are using medicines and dabbling with medical methods; the detail men from the pharmaceutical houses make regular visits to many of them; it is a common thing for one of them to throw out the impression among his patients that he has taken a medical course, all but the graduation, and that he is fully qualified to administer medicines; and their organizations and legislative lobbies, their press committees and their hired attorneys are more and more demanding for them all the privileges of the regular physician.

These people without any, or with grossly inadequate training, are slowly and gradually taking over the practice of medicine, which is precisely the thing the American Medical Association has sought to prevent by making an end to the low grade medical schools. While the Class C medical college was indeed often a poor thing, the average of its graduates both as to ability and character was far above that of the multitudinous and noisy Class X, Y, and Z cultist schools that each year turn loose their hordes of ignorant, avaricious, and unethical parasites to batten on the public health.

The weakness of our position is in that we have neglected the education of our public. We have taken such pride in the really fine work that we know the profession has done

and is doing that we have lost sight of the importance and necessity of taking the public along with us; we have forgotten that in a democracy an unformed public is unprotected, and easily victimized by false and pernicious doctrines.

Our excellent code of ethics has contributed no little to this sad state of affairs. Not only have we ostracised the advertiser, we have frowned upon the doctor who broke into the public prints from any cause and have suspected him of seeking notoriety and of subtly trying to evade the ethical code. We have been in possession of the greatest amount of truth so far discovered in our field of work—truth that has been slowly and painfully dug out and developed by our confreres of the past and present—and we have persisted in hiding our light under a bushel. This attitude might have resulted in very little harm were human nature all that it should be; but alas, the avaricious and unprincipled still abound!

The cults have taken advantage of the situation. Since we failed to take the public into our confidence and acquaint them with the truth as only we know it, these people have taken the people into their confidence, and in place of a diet of truth have fed them the husks of mysticism and hallucination until the public mind on this subject is in the chaotic condition depicted in the Chicago investigation.

The fault lies not in the attitude of the people, in the rejection or danger of rejection of the truth, on their part. The people have never had the truth ably and forcefully presented to them. They are like the jury that must make a decision after hearing only one side of a case, and that the wrong one. As is to be expected many are deciding wrongly. That this is already resulting in much harm and that it portends serious danger for the future no well informed person will deny.

The doctor is apt to underestimate the extent of the falling away of the people from medical doctors, because, due to the reduction in the number of such doctors, his own following seems as numerous as ever. The figures showing the steady decline in the number of graduates from the medical schools tell the story. Fifteen or twenty years ago the number of graduates each year approximated 7,000; ten years ago, 5,000; last year a few above 3,000. While the decrease in numbers has to some extent been compensated for by an improvement in quality, still the figures are so striking that they can have only one meaning.

It is conceivable that, because of the high cost of medical education and the long and hard years of application and study necessary

to qualify one to receive the degree of M.D., and because of the competition, the unrestricted competition from the cheap and unregulated cult schools, the time may soon come when the last medical school will close its doors for lack of matriculants.

The high grade medical school cannot exist without students, and it is evident that conditions are making the medical profession continually less attractive as a life career to the youth of our country.

It is up to us. It is up to us because there is none else who senses the danger in the situation or who has the proper information to cope with it.

There is no need to change the ethical standards for the individual physician, but there is a crying need to change the attitude and tactics of the organized profession. For years we have witnessed the enemy sowing tares and have not seemed to realize that it is our fields that are being despoiled. We need to put aside our sham dignity and diffidence and go to the people and tell them and prove to them that these bogus sciences and cults are poisonous weeds that need uprooting. We need to take a wholesome lesson, to borrow a leaf from the book of experience of the cults themselves. They having made the success they have, not through any intrinsic worth or merit in their methods of treatment, but through the power of a persistent and widespread propaganda, surely we who have the truth to tell can tell it so convincingly and forcefully that it will prevail over their jargon of plausible pseudoscience and mysticism.

We live in an age of propaganda. A self-evident lie, if uncontradicted and if persistently and blatantly repeated, will find many believers. It is not enough for the merchant's success in these days that he have first-class goods on his shelves, cleverly displayed and fairly priced. If he depends on the goods to sell themselves, some competitor with inferior goods at higher prices may, through the power of suggestion in advertising, steal all his customers away. The honest goods and the fair prices must be incessantly hammered at the people's consciousness, or the goods may grow stale on the merchant's shelves.

If the things are true about medicine that we have abundant reason to know are true, the story we shall have to tell has enough punch in it to make it one of the most interesting and convincing stories ever told in America.

We can no longer afford, either for our own or the public's welfare, to leave people ignorant of things medical and to lie supinely by while they are made victims of a false and fraudulent propaganda.

The American Medical Association last year got out a lay magazine, a journal of individual and community health, which undertakes to teach the public the things it needs to know for its protection against disease and to render it capable of using intelligent discrimination when in need of advice or treatment. The idea is good, although about two decades late, and in time this journal, *Hygeia*, will doubtless accomplish a great amount of good in the slow process of public education. Every physician should constitute himself a committee of one to put this magazine into as many homes as possible.

But such a publication is a slender reed on which to hang so huge a burden; it will do good, but it is too much like trying to put out a fire with an atomizer.

We need to adopt an aggressive campaign. We need to attack the enemy in a field where he is strongly entrenched and fortified—in the lay press. We need a committee of the American Medical Association, if the proper committee is not already in existence, who with the help of advertising experts will block out a plan of public education and true health propaganda that will get the truth in this matter before all the people and keep it there in installments in every issue of every newspaper and lay periodical in the country, until the pretenders and fakers are left not a leg to stand on.

Such a campaign would necessarily, of course, involve the expenditure of very large sums of money. If the cults can raise such sums, as we know they have done and are doing, surely we can do as much and a bit more.

If we fail to do it we are betraying our public into the talons of the vultures, we are failing in the performance of our most sacred duty.

I offer for consideration the idea that, beginning with the county society, we should have a committee of public education which should raise such funds as would appear necessary for its work by assessment of the membership.

INFANT FEEDING*

W. E. BESS, M.D.

SEDALIA, MO.

There are three essential requirements for infants food. Namely, it should contain the proper elements, be digestible and should contain the proper quantity of food, which is best estimated by caloric standards. The elements are proteids, fats, sugars, mineral salts and water.

*Read before the Lafayette County Medical Society, July 15, 1924.

The proteid is essential for cell construction and to replace the nitrogenous waste. The fats save nitrogenous waste, supply heat and energy and add to the body weight by storing up fat. The sugar supplies heat and energy and replaces fat waste in the body. The food of all young mammals contains from 80 per cent to 90 per cent water. Milk, sugar and water mixtures are most easily digested. Boiling the milk is all that is necessary to make the proteids digestible and has now supplanted the other methods.

Cow's milk diluted half and half gives 2 per cent fat. This amount of fat is digested with ease by the average infant. It is occasionally necessary to use skimmed milk in severe cases of indigestion caused by fat. Sugar is the most frequent source of indigestion of any of the elements. It is usually a laxative. A well infant under ten pounds in weight should receive one ounce of sugar in twenty-four hours, a well infant over ten pounds in weight may have one and one-half ounces of sugar in 24 hours. The sugar should be gradually increased until these amounts are reached. This gives in the mixture 6 or 7 per cent of sugar the same as in breast milk. Infants with vomiting, diarrhea or lack of appetite should receive no sugar temporarily.

There is a certain class of cases that do not do well on either dextrimaltose, cane or milk sugar, and who thrive astonishingly well upon malt soup extract, prepared in the following manner, to the proper amount of cold milk, is added an amount of wheat flour which varies with the individual infant, to the proper amount of hot water is added the malt soup extract. Equal amounts in bulk of flour and malt soup must be used. The cold milk and flour is put upon the stove and the water and malt extract is poured into it. This mixture is then slowly brought to a boil, taking about 20 minutes in the process and stirring all the while. When it has come to an active boil the food is done. The main point in the use of malt soup extract is that no set formula should be used. It is well to begin with one-third milk and two-thirds water for very small infants, while older infants may be started with half milk and half water. When first using the food begin with one very scant tablespoonful of malt soup extract and one level tablespoonful of flour. The malt soup extract and flour should later be gradually increased in quantity, a tablespoonful at a time, as the infant needs more food and as its tolerance increases. Care should be taken to reckon the calories very accurately in order to make sure that over feeding or under-feeding will not result. It is seldom necessary to use more than four level tablespoonfuls of flour or four scant tablespoonfuls of malt soup extract, when the

bulk becomes too great with half milk and half water, two-thirds milk or even three-fourths milk may be used. Malt soup is fed at the same intervals and in the same quantities as any other food. It may be continuously used for a period of four or five months without causing anaemia, rickets, or other nutritional disturbances. The danger of scurvy is obviated by giving orange juice after the food has been used for two months, or sooner in older infants. This is a detail which should not be omitted in this food or any other food that is boiled.

Orange juice should be given to the normal bottle fed infant at six weeks of age, beginning with a teaspoonful once a day, one hour before a feeding, preferably at 8:00 a. m. If the orange juice agrees, it should be increased a teaspoonful each week until the juice of a whole orange is given once a day. Occasionally when orange juice is given infants have loose, undigested stools, colic or vomiting. Such infants are usually difficult to feed. When orange juice seems to disagree, potato water or the juice from canned tomatoes may be tried.

Caloric value of infant foods. 1 ounce of milk equals 20 calories, 1 ounce of sugar (any kind) equals 120 calories, 1 ounce of flour by weight equals 100 calories, 1 ounce malt soup extract equals 90 calories.

There is nothing mysterious about calories. A ton of coal put into a furnace has a given value, measured by the amount of heat and possibly the energy it supplies to an engine. The term or unit which is used to express the value of this coal is a calorie. A calorie is the amount of heat necessary to raise the temperature of 1 kilogram of water, 1 degree C. A ton of coal, therefore, has a certain definite caloric value. In the same way, an ounce of milk when utilized by the human economy has a certain definite value, and will produce a certain amount of heat, energy and growth. An ounce of sugar or flour or any other food, also has a certain definite caloric value. The values of these different foods have been determined by physiologists and chemists and the caloric value of all foods are now definitely fixed and known.

The caloric requirements for bottle fed infants. Fat infants over four months of age need forty to fifty calories per pound a day. Average infants under four months of age and moderately thin babies of any age need 50 to 55 calories per pound a day. Emaciated infants need 60 to 65 calories per pound a day.

To determine the number of calories a baby needs in 24 hours, multiply the weight of the individual infant by the caloric requirements per pound. To determine the amount of milk needed in 24 hours, subtract the caloric value

of the sugar from the total caloric requirements. To determine the number of ounces of milk needed in 24 hours, divide the number of calories of milk by 20. To determine the quantity of water, subtract the amount of milk from the total 24 hours amount of food that the individual infant can take. With older infants begin with one-third milk and two-thirds water. With younger infants begin with one-fourth milk and three-fourths water. It is advisable at any age to begin with a very small amount of sugar. In the newborn no sugar should be added until the stools have become firm, smooth and yellow, showing no traces of mucus. To determine the 24-hour quantity of food, multiply the number of feedings by the number of ounces taken at a feeding. The quantity of food given at each feeding is from 1 to 2 ounces more than the number of months of the infants' age, with a minimum of 3 ounces, and a maximum of 8 ounces though under size infants can often take only 1 ounce for each month of their age. The number of feedings in twenty-four hours during the first four months is usually seven, at three-hour interval during the day and four hours at night. After five months of age, six feedings in twenty-four hours may be given, at three-hour intervals during the day, except the last which is four hours. A few under-sized, feeble or premature infants under four months of age may be given ten feedings in twenty-four hours, at two hours interval during the day and four hours intervals during the night.

One of the first principles of caloric feedings is never to fulfill the caloric requirements in the following classes of infants: (1) In the newborn for the first two weeks. (2) Normal abruptly weaned from the breast. (3) Infants whose previous food has not contained cow's milk. (4) Infants who have been over fed or under-fed. (5) Infants who have diarrhea or who have recently recovered from diarrhea. (6) Infants who have excessive vomiting or who have recently recovered from excessive vomiting. (7) Infants with loss of appetite or partly breast fed.

Causes of acute vomiting, viz., acute indigestion, infectious gastro-enteritis, general infectious diseases such as pneumonia, acute exanthema, etc., peritonitis, intestinal obstruction, nephritis, cerebral vomiting from meningitis, brain tumor, etc., drugs and poisons. I think that over 50 per cent of the vomiting, indigestion and diarrhea that occur in infants with pneumonia fever is due to their medicine being given in syrups, they're getting more sweets than they can digest. Their medicine should be given in water regardless of the taste. Sick infants require one-third to one-half the amount of normal food.

Treatment for acute vomiting. Stop food

and water, empty the bowels, wash out the stomach, administer sedatives.

Causes of habitual vomiting. Too rapid or too slow feeding. Feeding in a reclining position and leaving the infant to take the bottle alone, this causing it to swallow air, too long a nipple, which gags the infants, tossing the infant about or handling it too soon after feeding, tight belly-band and clothing.

Treatment. Feed one-third milk and two-thirds water boiled together with no sugar or a very small amount of sugar. Gradually increase to half and half and add sugar. Use boiled skimmed milk without sugar when the case is not controlled by the above treatment.

Organic causes of habitual vomiting: Hypertrophic pyloric stenosis, pylorospasm, dilatation of the stomach, gastropnoia. The diagnosis of pyloric stenosis is seldom difficult, if the vomiting has persisted for more than one week. The condition is characterized as follows: clinically by projectile vomiting, visible gastric hyperperistalsis, constipation and progressive emaciation. Functionally, by more or less marked impermeability of the pylorus. Anatomically, by hyperplasia of the muscularis of the pylorus. The symptoms of pylorospasm are less marked than those of pyloric stenosis. The vomiting is less severe, the stomach is usually empty within four hours, the stools are seldom scant, gastric hyperperistalsis and palpable tumor are usually absent. The weight may remain stationary at first then they will lose in weight. The treatment of pyloric stenosis is mainly dietary and surgical. For years internal treatment and operation opposed one another. We now know that either procedure may lead to recovery. The question to decide in each instance is, which procedure will entail the least risk? Success in the treatment of this disease depends primarily upon the condition of the patient at the time that proper treatment is instituted, the facilities for the proper nursing, care and isolation of the patient, the degree of obstruction (hypertrophy and spasm) at the pylorus and the skill of the physician or surgeon. The feeding of thick food especially thick cereal, has become a standard dietary measure. Birk used cornmeal mush and was probably the first to recommend thick food as a therapeutic measure in the treatment of this condition. Sauer used farina paste successfully in a five weeks old infant. Numerous clinicians have written about the value of atropine sulphate and papaverin hydrochloride. The best results seem to be obtained if the drug is given about an hour before meals. Since 1911 the Rammstedt operation (the first step of the Weber operation) has rightly become the operation of choice. Strauss, in 1915, modified the Rammstedt operation. Rammstedt says, "In every

case of congenital pyloric stenosis, the internal treatment should be tried first. If after two weeks of careful clinical observation, all the recognized dietary and therapeutic measures fail to accomplish a weight increase, then operation is indicated. The great difficulty rests in deciding just when to advise operation." Finkelstein recommends the Rammstedt operation when a two weeks trial with thick food fails to bring relief. The dietary treatment of operative cases is breast milk when it is available. If the supply is insufficient, protein milk is of extreme value.

Causes of loss of appetite: Wrong feeding or over feeding, limited digestive capacity, inanition, sore mouth or throat which makes it difficult or painful for the infant to swallow. Treatment. Feed one-third milk, two-thirds water, without sugar, lengthen the intervals between feedings for the older, larger infants, use a nipple with a very large hole for the weak infants, and administer strychnine, gr. 1/300 to 1/150 every six hours, before a feeding, feed by lavage as the last resort.

Symptoms indicative of successful breast-feeding, viz., the infant gains 5 to 8 ounces a week the first six months and after that from 3 to 6 ounces a week. It falls asleep as soon as fed or while feeding and sleeps twenty hours out of every twenty-four up to the sixth month of age, it does not cry more than one hour a day, it has from one to three normal stools a day and no vomiting or gas. Symptoms indicative of unsuccessful breast feeding, viz., the infant loses in weight, ceases to gain or gains insufficiently, it remains too long at the breast, it cries or frets while nursing and when taken from the breast. It has abnormal stools, and has extreme vomiting that is due to the breast milk.

Conditions under which the breast feeding should be continued, viz., where the infant is normal and doing well, where the infant is not doing well and the condition can be accounted for by errors in the management of the mother or infant, or by the health of the mother. Errors to be corrected in the management of the mother or infant, viz., regulation of the mother's diet, improving, if necessary, the mother's appetite, regulation of the mother's bowels, regulation of other hygienic details, such as exercise, sleep and mental quiet, remedying any actual disease of the mother, such as eczema, etc., regulation of feeding times and intervals, correcting any errors, in the detail of giving the breast, remedying any defects in the hygienic surroundings or management of the infant.

The newborn infants should have the breast at four-hour intervals the first three or four

days. As soon as the infant has learned to take the breast well, if it is not satisfied it may be given unsweetened warm water after nursing then if it continues unsatisfied I give it a teaspoonful of Dryco brand of dry milk in an ounce of warm water after nursing. If constipated one-half or one teaspoonful of dextri maltose No. 1 in an ounce of warm water after nursing until the milk comes. The proper way is to nurse the infant (in a semi-reclining position with the mother sitting erect) until it stops of its own accord or perhaps goes to sleep with a minimum of 5 minutes and a maximum of 20 minutes. It is never advisable to nurse from more than one breast at a feeding, except where two or more infants are nursing the same mother. If the infant is not getting enough from one breast at a feeding, it is better to supplement the breast with a bottle feeding. The belly-band should be discontinued after six weeks of age. Jaundice occurs in at least one-third of all new born infants. It comes on from the third to the fifth day of life. The average duration of mild cases is from three to four days. In its simple form it is supposed to be due to a too active secretion of bile. Calomel is not indicated in the jaundice of new born infants. In the first three months of life, the normal baby will suck anything that comes to his mouth. After the third month there is some difficulty in making the baby take a bottle or anything else if he has been accustomed to the breast alone and this difficulty increases with each month. The breast fed baby should be accustomed to take water from the bottle (with different kind of nipples) and spoon from the very start and there should be no let up. This precaution will avoid it refusing proper food other than the breast from six months of age until weaned.

Do not stop the breast for indigestion in nursing infants who are gaining well in weight. Diminish the infant's food supply by limiting mother's diet. Shorten infant's feeding time to five minutes once in three hours. Where the infant does not gain normally in weight after a thorough trial upon the breast, under the best possible conditions, reduce the nursing time to five or ten minutes completing each feeding with the bottle. Indications for supplemental feedings where the infant is being intentionally weaned from the breast, or where the mother is obliged to be away part of the day.

Contra-indications for breast-feeding, viz., where the infant has severe prolonged gastric or intestinal indigestion associated with loss in weight or cessation of gain, when at two previous births the mother has been unsuccessful in nursing the infant. Where the mother has

puerperal convulsions, or is pregnant, or where the mother has some prolonged disease.

Infants under four months of age that have to be taken from the breast, marasmic infants, feeble infants of any age, infants who have already received a food injury and infants that do not prosper upon ordinary mixtures of fresh liquid milk, I put them on Dryco brand of dry milk, it is better tolerated than raw milk or boiled milk mixtures. Dry milk is a powder made from fresh cows' milk by the evaporation of the water while the milk flows over hot revolving cylinders and in its dry state contains all of the original elements except water. It is more easily digested than boiled cows' milk and there is no more risk of rickets or scurvy with this diet than with a good quantity of raw cows' milk. If constipated on this, I add Dextri-maltose No. 1 in sufficient quantity to overcome the constipation. The maximum strength of the food is one tablespoonful to the ounce of water, weaker solution always being used at first. Two and one-half to four tablespoonfuls leveled with a knife of dry milk for every pound of body weight, meets the caloric requirements of infant feeding. I begin with one-half to one tablespoon of dry milk dissolved in one to three ounces of hot water and increase the feeding one-half to one tablespoonful each day until the caloric requirements are met. Where thirty to forty tablespoonfuls of dry milk are consumed daily, it is advisable to add sugar or gruels or both to the feedings to cut down the high protein in the dry milk which causes the urine to become ammoniacal, by increasing the calories with starch and sugar this excessive ammonia output in the urine can be avoided. Dry milk will keep for one year. Dry milk is not a panacea, for there never will be such a thing as a panacea in infant feeding. I think that proprietary food and patent medicine are in the same class from a scientific standpoint. Weaning. I prefer having the infant completely off of the breast at fourteen months of age, taking six weeks to wean an infant. The infant should have cereal water at six months of age and cereals without sugar at seven months, zwieback, toast or graham crackers should be added at eight months, cows' milk from cup at nine months and apple sauce or stewed prunes if constipated. From twelve to fourteen months baked potato with butter on it, carrots, spinach, green peas, string beans, or asparagus tips may be added. From fourteen to twenty-four months egg coddled, give only a teaspoonful at first, hominy, cornmeal mush, farina and baked apple. At twenty months of age breakfast bacon may be allowed twice a week, eggs not allowed on those days.

ETHER INJECTIONS IN THE TREATMENT OF WHOOPING COUGH

JOS. P. COSTELLO, M.D.

ST. LOUIS

During the past few years much has been written in foreign countries on the treatment of whooping cough by intermuscular injections of ether. The results published by these men seem to justify its use in certain cases where the ordinary methods fail to relieve the distressing symptoms.

Vaccarezza and Inda¹ after two years of experience in this method of treatment, report it to be superior to any other treatment. J. Bedo² was impressed by the fact that pertussis was oftentimes cured by general anesthetic of ether. Mason attempted to treat whooping cough by using 6 c.c.'s of a 40 per cent solution of ether in olive oil injected into the rectum. His results however, were apparently not so good as when the ether was injected intermuscularly. Reim³ in addition to ether, added camphor and reported good results in 37 cases. Genoese⁴ treated 50 cases by ether injections and believes ether to be superior to the vaccine therapy.

In reviewing old textbooks it is very frequently mentioned, in the treatment of whooping cough, that in severe cases chloroform or ether should be used as an inhalant for a very short time to relieve the spasmodic cough.

Ether has also been used as an antiseptic in gynecological work and is believed by some men to be germicidal when introduced in the uterine cavity (vapor form) in cases of septic abortion.

When 1 to 2 c.c.'s are injected intramuscularly every other day over a period of six injections there is no doubt but what it has a specific action on the organisms causing whooping cough, as well as relieving the paroxysms and breaking up a tenacious sputum.

The antiseptic action of ether is in its elimination through the respiratory system in vapor form. A few minutes following the injection a strong odor of the ether is found on the child's breath. Using this as an index as to when it is eliminated, I found in this series of cases that at the end of three hours elimination was complete.

Of the 32 cases treated by me *by this method alone*, 4 cases were cured after two injections, 18 were benefited, that is, after the 6th injection the paroxysms were less frequent and the coughing less violent.

Ten apparently ran the normal course of the disease, and all of the 32 cases were without complications.

The following cases well illustrate what spectacular cures may follow this treatment.

Case 1. David K., age two and one-half years, had had whooping cough for the past three weeks. The paroxysms were occurring as high as 14 to 16 times a day. At this time he began to have convulsions which would last for several minutes with each paroxysm of coughing. His temperature was 102 degrees. He had retained nothing by mouth for the past 36 hours. The physical examination showed extreme pallor, skin dehydrated, moderate degree of cyanosis, rales of the submucous variety heard throughout the chest, abdomen distended, no masses palpable, no abnormality in normal reflexes, no pathological reflexes. One c.c. of ether was injected intramuscularly and two days later 1 c.c. of ether was injected again. Following the first injection he had but one mild paroxysm of coughing. The vomiting of course ceased and he made a very rapid, uneventful recovery.

Case 2. Baby K., age one month, began to cough two weeks following exposure to whooping cough. The cough became progressively worse for a week, when it developed a typical whoop. Temperature was 99. The white blood count 16,000. Physical examination showed a normal infant with the exception of many loud rales heard throughout the chest. During the examination the child had a paroxysm of coughing and vomited a thick tenacious fluid. One c.c. of ether was given intramuscularly. This was followed by an extreme irritability on the part of the child, lasting for 12 hours. After the irritability had worn off the child fell into a sleep and slept for several hours. At no time however after the first injection did the child have another paroxysm of coughing and after three days the chest was clear. The irritability in this case, following the injection of the ether, was noted in five cases of this series and usually when present lasted approximately 12 to 24 hours.

There is but one objection to the ether treatment, and that is, that not infrequently a slough will occur at the site of the injection. This occurred in 1 of the 32 cases. It began as an erythema followed by a necrosis of about one-half inch in diameter. This slough heals very slowly, leaving of course a scar much like a vaccination scar.

While as yet there is no specific cure for all cases of whooping cough I believe that those cases which do not respond to the vaccine therapy early and are threatened with or have complications, should receive this method of treatment, for in this series the most marked results were obtained in cases where complications threatened. As you see from the above it does not affect approximately 33 per cent of the cases, but in reviewing recent literature, any means of therapy which definitely helps 66 per cent of the cases is well worth a trial.

305 Lister Bldg.

REFERENCES

1. Vaccarezza and Inda Samana Medica, Buenos Aires, Oct. 6, 1921, No. 40.
2. J. Bedo Zeitschrift für Kinderheilkunde, Berlin, June 7, 1923, P. 325.
3. Rein Medizinische Klinik Berlin. May 28, 1922.
4. Genoeese Policlinico Rome 29. Aug. 21, 1922.

SPECIAL ARTICLE

ANNUAL MEETING OF THE ST. LOUIS PURE MILK COMMISSION*

President's Report

The officers of the Milk Commission today submit their reports at the end of its twenty-first year of activity. It is also the first full year of twelve months functioning under the auspices of the "Community Fund."

Your officers and directors feel that they acted most wisely in being a charter member of the Community Fund, as our two years of such experience has relieved us of many financial worries and enabled us to put more undivided thought to our work as we knew we had a definite income with which to carry it on.

Our heartfelt thanks are hereby rendered the organization and the public-spirited men and women who have made the Community Fund a success.

This year, the directors of the Community Fund have been unable to raise the full requirements of this budget and are investigating the various member organizations to discover if there is any duplication of work among them. The Milk Commission has been one of those investigated, and your directors have promised to make a full report to the Community Council before next fall's campaign as to the evolution of the Commission's work, in meeting changing conditions in infant feeding, viz., whether laboratory modification of milk is still necessary, or if it can be replaced by home modifications among the poor under the tuition of the municipal nurses.

Your president would express his opinion that the giving up of laboratory modification would work a distinct detriment to the babies of the poor, the uneducated, and the foreigners; although he does recognize the growing simplicity of modification methods.

Our committee is already at work on the problem and must have their report and conclusions ready before fall. This is the important question before the Commission at present.

Again let me stress the fact that our by-laws direct that the Commission and the certification committee have regular monthly meetings, and request as regular an attendance as possible at them. Only by keeping closely in touch with our work, can we maintain an organization worthy of the confidence of the Community Council and of the general public.

Our work has varied very little during the

*Held at the Provident Association Building, January 22, 1925.

year. We distribute considerable quantities of whole, modified, and sour milk of high grade to the poor babies of the city, somewhat more than half free and the rest at cost price. We supervise the production and handling of "Certified Milk" for the babies of the well-to-do. Thus babies in all stations of life can have the highest grade of milk if their parents or physicians desire it. Without the Milk Commission neither of these would be possible and we should probably slowly drift backward to conditions of milk supply of over twenty-one years ago. For there can be no doubt that the work of the Commission has materially raised all the standards of the dairy business in St. Louis.

The second part of our work, that of certification is, and should be, kept entirely separate from our philanthropic function in any plans for our future. The certification of milk in St. Louis should never be given up and the Milk Commission is the only authorized organization to carry this on.

In closing, your president wishes again to express his thanks to the Community Fund for removing our financial burdens; and personally, to thank our efficient superintendent for his untiring care of the laboratory and his monthly inspections of the certified dairies.

GEORGE M. TUTTLE,

January 22, 1925.

President.

Secretary's Report

The St. Louis Pure Milk Commission has just completed its twenty-first year of continuous operation. The year just passed has had no outstanding features, nor has there been any material change in the methods or objects of the Commission. The work of the laboratory shows some increase over the year 1923 and there has been much interest manifested in connection with the production of "Certified Milk."

This feature of the work of the Commission has been most satisfactory. Two farms are producing and delivering their product by refrigerated trucks to the local distributing dairies which insures a better product and a speedier delivery. The producers have maintained a low bacterial count with a general average well within the requirements. The sales of "Certified Milk" are slightly greater than last year; 571,101 quarts and 389,124 pints being delivered to the consumer, exclusive of laboratory. This is equal to about 530 gallons daily. Three hundred and eighty-two samples of Certified Milk were examined chemically, and two-hundred and twenty-one bacteriologically. Ninety-nine visits to farms were made; a number of these to farms which

were not certified. Medical examination of employees was maintained, 14 men being examined. The proprietors of the farms have cooperated in the matter of medical examination, realizing that it is a most valuable step toward the protection of "Certified Milk," especially against typhoid fever. Five hundred and nineteen head of cattle had the tuberculin test without finding a single reactor. At the present time, two additional farms are contemplating entering into the work of producing "Certified Milk," with a view to supplying one of the large hospitals and railroad dining car service. As to the latter, the Certification Committee is proceeding with caution, and is making an investigation as to the facilities of the railroad for the proper care of milk. Should this work be undertaken, it will be of much value to the Commission in advertising "Certified Milk." As previously stated, there has been a small increase in the consumption of "Certified Milk." An effort should be made to instil a greater interest in the value of "Certified Milk," as a part of the daily diet. Through educational channels every effort should be made to emphasize the supremacy of "Certified Milk" over all other grades and to educate the average mother that none other than "Certified Milk" should be used in rearing the baby. This point was strongly emphasized at the last annual meeting of the A. A.

M.M. C., held in Chicago last June, which your secretary attended. After the meeting, a visit was made to a number of the farms supplying Chicago with "Certified Milk," and it gives me pleasure to state that the farms under our supervision compare most favorably with those visited. The secretary would like to suggest that the Certified Milk Committee visit our farms and become better acquainted with the methods now employed in the production of "Certified Milk."

The work of the laboratory continued throughout the year in a satisfactory manner. The milk supply remained the same, daily delivery being made to the plant. During the year 168,966 bottles of whole and modified milk were prepared of which 70,457 bottles were sold and 98,509 bottles donated. Of the amount prepared, 41,530 bottles were special modifications. Whole cultured milk sold 119 Qts.; donated 401½ Qts. Total free milk 58.2 per cent. Compared with last year this was an increase of 19,072 bottles of milk prepared and delivered with a corresponding increase in free milk of 14.63 per cent. This is attributed to the fact that nearly all of the free cases are sent to the Commission from the Municipal Clinics. Prescriptions received totaled 386, divided as follows: 356 from

clinic physicians and 30 from private physicians; 339 babies received milk during the year. These were classified as follows:

DONATED		
Carried over from 1923..	50 babies	5,933 bottles
New during 1924,.....	105 babies	92,576 bottles
	<u>255 babies</u>	<u>98,509 bottles</u>
SOLD		
30 babies		5,889 bottles
154 babies		64,568 bottles
184 babies		<u>70,457 bottles</u>

It is evident that the work of the Commission could be further increased by the establishment of new stations. At the present time, a survey is being made of child life as to the need of the work of the Commission. Five cash and carry milk stations were conducted, distributing 34,937 Qts. of milk.

The Commission again operated its plant on a fixed budget. This has proven very satisfactory as we have had no financial worries to distress us. The total receipts for the year amounted to \$14,832.46, of which amount \$10,973.57 was secured from the Community Fund. Expenditures totaled \$14,717.14, leaving a balance of \$115.32. The estimated budget for the year 1925 calls for \$15,349.01, of which amount the Community Fund is to contribute \$11,734.01.

HERBERT L. MORTLAND,

Secretary and General Manager.

January 22, 1925.

ROENTGEN-RAY TREATMENT OF HYPERTHYROIDISM

A study made by Thomas A. Groover, Arthur C. Christie and Edwin A. Merritt, Washington, D. C. (*Journal A. M. A.*, Nov. 29, 1924), of the results of roentgen-ray treatment of hyperthyroidism in individual cases and by means of the incomplete statistics so far available indicates that this method will probably furnish about the same percentage of permanent cures of exophthalmic goiter as surgical treatment in the best hands. The roentgen-ray method has the following advantages: (a) There is no mortality resulting from the treatment; (b) patients will submit to this method of treatment at a much earlier stage of the disease than to operation; (c) the method is applicable to inoperable and to post-operative cases. Patients with hyperthyroidism should first receive roentgen-ray treatment, and be operated on only if the disease fails to respond to this treatment. This would not apply to patients with toxic adenoma with mild hyperthyroidism who have no vascular or other diseases which render them inoperable. The operative mortality in this class of cases is very low, and surgery has the great advantage of removing the tumor. Our general impression is that roentgen-ray treatment is not so useful in toxic adenoma as is exophthalmic goiter, but that it may be of great advantage in rendering very toxic cases operable and in the treatment of cases that are inoperable for reasons other than the hyperthyroidism.

FOREIGN BODIES OF DENTAL ORIGIN IN THE LUNGS

The analysis of cases made by E. G. Gill, Roanoke, Va., (*Journal A. M. A.*, Nov. 29, 1924), includes foreign bodies of the following types: teeth, dental burrs, gold crowns, dental plates, fillings, blades of forceps, plaster of Paris, hard rubber from dental mouth gas, disks of Allen's dental cement, and nerve canal reamers. In seventy-six of the 117 cases, teeth were the foreign bodies. The right bronchus in the favorite site of lodgment, the ratio being 2:1. The majority of accidents occurred while the patient was under an anesthetic. The most constant and definite symptom is a cough, which varies from an occasional one to one that is persistent and accompanied by profuse expectoration. In this series, sixty-four cases developed a cough as an early or a late symptom. The sojourn in the lungs of the foreign bodies presented in this series varied from four hours to thirteen years. In the case of thirteen years' duration, four false teeth on silver clamps were aspirated during a fit of coughing. Roentgen-ray examination was not made and bronchoscopy not attempted. The patient died. Of the 117 patients in the entire series, eighty-four recovered. The results were uncertain in nine, and there were twenty-four deaths. Fourteen patients died as the result of lung abscess, one following tracheotomy, three from symptoms simulating tuberculosis, one from bronchiectasis, one from pneumonectomy; in three cases, the cause of death was not stated. Of the eighty-four cases in which the patients recovered, the foreign body was removed bronchoscopically in thirty-eight instances; it was coughed up in thirty-seven instances; it was removed by lower bronchoscopy through tracheal openings in five instances, and by successful tracheotomy in three, and one patient was relieved by artificial pneumothorax. Gill urges that in every operation about the mouth, care should be exercised to prevent aspiration infection. Symptoms in most cases are immediate; namely, cough, pain in chest and hemoptysis. Later symptoms may simulate pulmonary tuberculosis. Seven cases in this series were diagnosed as tuberculosis. Tuberculosis may coexist with lung abscess. Bronchoscopy is indicated in any case as a diagnostic measure if the history and roentgen-ray findings are not conclusive. When the presence of a foreign body has been definitely established, there is only one treatment—bronchoscopy. Expectant treatment is always hazardous, and lung abscess may develop at any time. Death is due in most instances to lung abscess, bronchiectasis and gangrene.

PALPATION HEMATURIA AS A TEST IN FLOATING KIDNEY

After the patient has voided, Morris H. Kahn, New York (*Journal M. M. A.*, Nov. 29, 1924), palpates one or both kidneys, exerting only mild pressure during three inspirations of the patient. After a few minutes, the patient voids again for a comparable microscopic examination. In many cases of nephroptosis in which the kidney could be held down by the palpation hand for several inspirations, bleeding was produced by palpation trauma. In a few cases, when only the lower part of the kidney was palpable, this was not possible. The kidneys are apparently sufficiently sensitive to direct pressure or palpation trauma that care should be taken not to induce microscopic hematuria. The urine should be examined before the physical examination is made, before the kidneys are palpated. A mistaken diagnosis of hematuria may result from neglect of this suggestion.

THE JOURNAL

OF THE

Missouri State Medical Association

MARCH, 1925

EDITORIALS

THE KANSAS CITY MEETING

The sixty-eighth annual meeting of the Association will be held in Kansas City, May 5, 6, and 7, with headquarters at the Baltimore Hotel where the principal meetings will be held and the exhibits displayed. The program committee is preparing a series of clinics for the benefit of members during this session and limiting the number of papers to be read. Members who desire to read papers are invited to make their requests known to the member of the committee nearest your home town.

During the mornings of the three days, clinics will be conducted at the various hospitals and dispensaries, the arrangement for these being under the direction of Dr. Frank I. Ridge, Kansas City, member of the program committee. In the afternoons papers will be read in the Francis I. room of the Baltimore Hotel.

The House of Delegates will meet on Monday, May 4, one day in advance of the regular scientific work, and complete as much of the business of the session as is possible at that time. This arrangement will obviate the conflict between the sessions of the House of Delegates and the scientific meetings which have been so disturbing to the work of the Association at previous sessions.

At the Kansas City meeting we will have for the first time the formal gathering of the Women's Auxiliary to the State Medical Association. It will be recalled that the Auxiliary was organized at Springfield in 1924. During the year the officers of the Auxiliary have worked most commendably and industriously to bring the wives and daughters of members of our Association into an organization that can be exceedingly influential in the promotion of public health education and increasing the usefulness of the county medical societies. The Woman's Auxiliary will probably meet in the Muehlebach Hotel where they will have a program of interest to the women and the physicians as well as to the public. The success of the next year's work of the Auxiliary

will depend largely upon the officers of the Auxiliary and members of the county auxiliaries and needs such conferences as this meeting will afford.

Our meetings in the past have lacked the refining and stimulating influence of the women members of the medical family, as there seemed to be little enthusiasm for them to attend the annual meetings. Now, however, we feel that there is a real purpose in having the wives and daughters accompany the members, so we hope that there will be a large number of the members of the Woman's Auxiliary attend the Kansas City session.

The entertainment committee of the Jackson County Medical Society is preparing to fill the leisure hours with enjoyable affairs of one kind and another so we anticipate that the Kansas City meeting will show the largest attendance in our history and awake new enthusiasm for the success and wider usefulness of the State Medical Association.

STATUS OF BILLS IN THE LEGISLATURE

At this writing the amendments to the medical practice law, prepared by our Association and introduced in the Senate and House of Representatives on January 23, are on the calendar for engrossment with good prospects of early passage. Two amendments to the bill were offered, one by the osteopaths and one by the Christian Scientists, each seeking to insert a clause exempting the members of those cults from the provisions of the law. Neither amendment has been adopted.

The other bills in the session that affect the practice of medicine and the public health are not making much progress. The chiropractic bill has been amended so as to require an adequate amount of education and medical knowledge, which is not of course acceptable to the chiropractors. A bill to prohibit the writing of prescriptions for intoxicating liquors is still in committee. A bill affecting the nurses was introduced (House Bill No. 440) but it was so revolutionary in its provisions that it failed to receive any support and its sponsors have practically ceased to push it. They have, however, offered some amendments to the present nurse law which would have a bad effect upon the control of the nursing situation and will probably not pass. A bill was introduced by Dr. Ray, of Kansas City, repealing Section 7330 of our present medical law. The attempt to repeal this section is a silly effort that if successful would destroy the enforcement of the act. It does not seem to have any possible chance of passage.

The physician members in the General Assembly, with the exception of Dr. Ray, are having an excellent influence upon the members of the Assembly in promoting sentiment for the passage of the amendments to the medical law. The remarkable support given these amendments by the newspapers of the state is a gratifying endorsement of our effort to make our medical practice act so rigid and flawless that the state board of health will in future find no difficulty in preventing incompetent and unqualified persons from obtaining licenses to practice. If adopted, the bill will furthermore empower the board to eliminate persons practicing medicine illegally and make the punishment for serious damage to the health of the people a penal offense punishable by two years imprisonment in the penitentiary.

A bill for the repression of prostitution has been introduced, sponsored by the Missouri Social Hygiene Association and other organizations. The bill presented is entirely in the interest of public health and efficiency. It is in no sense a reform measure, but is designed to assist the police and health officials to meet their responsibilities for repressing commercialized prostitution and controlling venereal disease. The offenses listed are prostitution, lewdness, and assignation, which involve in no way personal morality. The Missouri statutes at present on the offenses covered by this bill are very inadequate. The past few years have seen a radical change in the attitude of the general public on this subject. It is regarded at present as a serious problem in public health and community economy. The state board of health has recognized the effect of commercial prostitution upon public health by the following regulation:

Prostitution is hereby declared to be a prolific source of syphilis, gonorrhea, and chancroid, and the repression of prostitution is declared to be a public health measure. All local and state health officers are therefore directed to cooperate with the proper officials whose duty it is to enforce laws directed against prostitution and otherwise to use every proper means for the repression of prostitution.

The law is not an experiment. It is now in force in Connecticut, Delaware, Maryland, Maine, New Hampshire, North Carolina, North Dakota, Rhode Island, Vermont, and Ohio.

A DANGEROUS EXPERIMENT

Considerable consternation agitated the medical profession recently when it became

known that the eleemosynary board had been called upon to displace the steward at State Hospital No. 2, St. Joseph, and the steward at State Hospital No. 3, Nevada, in order to make room for persons friendly to Governor Baker. The eleemosynary board, by a tie vote, failed to make the changes and it was hoped that this attitude of the board would be accepted by the administration. Governor Baker, however, seems to have insisted upon the changes being made and as a result one of the members of the board, Mr. W. C. Pierce, of Maryville, a determined opponent of any change in the personnel of the institutions, resigned from the board. The Governor then appointed a successor whom it was believed would vote for the changes. As a result of this unfortunate happening another member of the board, Mr. A. J. Fitzsimmons, of St. Louis, has resigned.

The entire medical profession of the state is exceedingly aroused over the evil possibilities of this sort of interference with the eleemosynary institutions. While it is claimed that this movement does not indicate that the institutions will be thrown back into the political pot, the fact that the stewards who were displaced have performed their duties with commendable zeal and to the entire satisfaction of the eleemosynary board, seems to indicate that positions in the institutions are to be used for the payment of political debts. Although it is true that the stewards of the institutions have little direct contact with the care and treatment of the inmates of the institutions, they do have absolute control over the purchase and distribution of supplies needed in the medical department. It requires no stretch of the imagination to understand how a steward with an exaggerated idea of his importance and a feeling of security in the tenure of his office could disturb the serenity and harmony of the medical staff of the institutions by mean and petty acts in connection with the purchase and distribution of supplies.

The medical profession cannot view with complacency any disruption of the smooth working of the State Eleemosynary Board or the state hospitals. Under the board as composed previous to the recent changes, the most commendable steps toward harmonizing many unhappy influences had been made and the medical profession had come to look upon the eleemosynary board as one that would not be disturbed by any governor as long as the members were performing their functions and maintaining the institutions in a manner acceptable to the people. While our Association is not directly interested in the hiring or firing of a steward, we do feel that the circumstances

under which the recent changes in these officials were made was an extremely dangerous experiment that could easily lead to a malign interference with the medical staffs and the proper care of the inmates.

STATE BOARD OF HEALTH CITES
60 PHYSICIANS FOR TRIAL FOR
REVOCATION OF LICENSES.
DR. WALDO BRIGGS AMONG
THOSE CITED

Having come into possession of what it believes to be satisfactory evidence that a number of persons have obtained licenses to practice medicine upon false and fraudulent statements, the state board of health has issued citations to 60 doctors to appear before the board at St. Louis on March 16 to show cause why their licenses should not be revoked. Members of the profession and the public in general have welcomed this action of the state board of health because there is a general feeling among the people, due to the investigation by the *St. Louis Star* into the sale of medical diplomas and high school qualifications, and as a result of a survey of the state and of the board's records made by Dr. F. C. Waite and the members of the board, that licenses have been issued by the board to persons who did not possess the educational qualifications as well as adequate technical training to treat the sick intelligently. While it is true that the medical law is defective in certain essentials necessary to safeguard the people from the licensing of unqualified persons, it is perfectly plain that the law intended to empower the board to refuse a license to anyone making a false or fraudulent statement concerning his qualifications and to revoke a license obtained under those conditions, but under our present law it has been practically impossible to obtain proof of fraud in the statements of the applicants necessary to satisfy the peculiar phraseology of the statute. It is the purpose of the bills introduced in the General Assembly at this session (Senate Bill No. 83, House Bill No. 223) to correct these defects and make it impossible in the future for the applicant to evade the letter or the intent of the law, or for the board to grant a license unless every provision of the law has been satisfied. On the basis of the disclosures that have been made and the statements of persons involved in the issuance of false credentials, the board will attempt to clean the medical field in Missouri by ridding the state of those unworthy persons whose potentialities for harm to the health and lives of the people are immeasurable. The

names of the persons whom the board has cited follow:

Waldo Briggs, St. Louis, dean and owner of the St. Louis College of Physicians and Surgeons.
Walter E. Abell, St. Louis College of Physicians and Surgeons.

Roland O. Bagby, Kansas City, Kansas City College of Medicine and Surgery. (Dr. Bagby's license to practice in Connecticut was revoked February 1, 1924.)

Hugo L. Baepler, St. Louis, St. Louis College of Physicians and Surgeons.

Spurgeon H. Barnett, St. Louis, St. Louis College of Physicians and Surgeons.

Calvin A. Beard, Kansas City, Kansas City College of Medicine and Surgery. (Dr. Beard's license to practice in Connecticut has been revoked.)

Commodore Edward Bennett, St. Louis, St. Louis College of Physicians and Surgeons.

Victor H. Bergman, St. Louis, St. Louis College of Physicians and Surgeons.

Clarence J. Bertaut, St. Louis, St. Louis College of Physicians and Surgeons.

John R. Brinkley, Milford, Kansas, Eclectic Medical University, Kansas City, 1915; Kansas City College of Medicine and Surgery, Kansas City, 1919. (Brinkley's Connecticut license was revoked and he is under the indictment in California on a charge of felonious conspiracy which grew out of the Pacific Coast operations of the diploma mill.)

Richard F. Boone, Kansas City, Kansas City College of Medicine and Surgery. (Boone's license to practice in Connecticut was revoked.)

Frederick Welton Brownfield, Crocker, Mo., a former dentist, St. Louis College of Physicians and Surgeons.

Oscar Richard Bullard, St. Louis, St. Louis College of Physicians and Surgeons, 1909.

John Buschman, St. Louis, St. Louis College of Physicians and Surgeons.

William Buell Dallas, Jefferson City, St. Louis College of Physicians and Surgeons.

Francisco Santos De La Madrid, Havana, Cuba, St. Louis College of Physicians and Surgeons.

A. M. Ecklund, St. Louis, St. Louis College of Physicians and Surgeons.

Joseph Solomon Ergas, St. Louis, St. Louis College of Physicians and Surgeons.

James J. Flynn, Kansas City, Kansas City College of Medicine and Surgery. (Flynn's Connecticut license has been revoked.)

Nathan H. Goldberg, St. Louis, St. Louis College of Physicians and Surgeons.

Anna (Chena) Goldstein, St. Louis, St. Louis College of Physicians and Surgeons. (Miss Goldstein's license to practice in Connecticut has been revoked.)

Richard Graeser, St. Louis, graduate of a Budapest college.

Loren A. Glasco, St. Louis, St. Louis College of Physicians and Surgeons.

Joseph Albert Grosskrautz, St. Louis, St. Louis College of Physicians and Surgeons.

Christian B. Gurlsee, St. Louis, St. Louis College of Physicians and Surgeons.

Edward W. Hamptil, St. Louis, St. Louis College of Physicians and Surgeons.

Solon Phillip Harris, New York City, St. Louis College of Physicians and Surgeons.

Otto Christian Hanser, St. Louis, St. Louis College of Physicians and Surgeons.

Morgan Lee Halliday, Pollock, Mo., Kansas City College of Medicine and Surgery.

Erwin Frank Henselmeier, St. Louis, former den-

tist, St. Louis College of Physicians and Surgeons. Alonzo G. Hobbs, St. Louis, St. Louis College of Physicians and Surgeons (Hobbs' license to practice in Connecticut has been revoked.)

Clarence L. Hobbs, St. Louis, Kansas City College of Medicine and Surgery.

Ray Beaman Horton, Kansas City, St. Louis College of Physicians and Surgeons. (His license to practice in Connecticut also was revoked.)

Lasley Earl Huber, Kansas City, Kansas City College of Medicine and Surgery. (Huber's Connecticut license has been revoked.)

Charles L. Hyatt, Desloge, Mo., St. Louis College of Physicians and Surgeons.

Clara W. McGrew, St. Louis, St. Louis College of Physicians and Surgeons. (Dr. McGrew formerly was secretary of the St. Louis College of Physicians and Surgeons.)

Walter Lyle Kelley, Pearl, Ill., St. Louis College of Physicians and Surgeons.

Frederick Joseph Killalee, St. Louis, St. Louis College of Physicians and Surgeons. (Killalee's license to practice in Connecticut has been revoked.)

William Vasilios J. Koutsoumpas, St. Louis, former druggist, St. Louis College of Physicians and Surgeons. (Connecticut license revoked.)

Adolph Mathew Krall, St. Louis, St. Louis College of Physicians and Surgeons. (License in Connecticut revoked.)

A. J. Lofgreen, Kirkwood, St. Louis County, St. Louis College of Physicians and Surgeons.

Lilburn D. Lahue, Kansas City, Kansas City College of Physicians and Surgeons.

Thomas R. Moore, Maplewood, St. Louis College of Physicians and Surgeons.

Horatius D. Osborn, Milford, Kansas, Kansas City College of Medicine and Surgery. (His Connecticut license also was revoked.)

Sylvan Harris Rhodes, Los Angeles, St. Louis College of Physicians and Surgeons.

Eugene J. Rinaldo, Los Angeles, St. Louis College of Physicians and Surgeons. (Rinaldo, former owner of a conservatory of music in St. Louis, is under indictment in San Francisco charged with felonious conspiracy as the result of the Pacific Coast operations of the diploma mill. Rinaldo's license to practice in California has been revoked and at the time of the revocation the California board called on the Missouri board for an explanation of why Rinaldo was licensed in Missouri.)

Cyril Henry Rogers, Chicago, St. Louis College of Physicians and Surgeons.

Albert Scheffsky, St. Louis, St. Louis College of Physicians and Surgeons.

Salvatore Albert Scimeca, formerly of Palermo, Sicily, now of St. Louis. St. Louis College of Physicians and Surgeons.

Nicholas J. Scotellaro, St. Louis, St. Louis College of Physicians and Surgeons.

K. L. Seaman, St. Louis, St. Louis College of Physicians and Surgeons.

Walter James Singleton, Kansas City, Kansas City College of Medicine and Surgery.

Charles C. Slaughter, Kansas City, Kansas City College of Medicine and Surgery.

James Perry Vickery, St. Louis, St. Louis College of Physicians and Surgeons.

Ralph A. Voight, Kansas City, St. Louis College of Physicians and Surgeons. (Voight, master mind of the national medical diploma mill ring, has been indicted in Washington, D. C., for misuse of the mails and is under indictment in San Francisco in connection with the ring's operations on the Pacific Coast. Voight's license to practice in Texas has been revoked.)

William Fred Wagner, Jefferson City, St. Louis College of Physicians and Surgeons.

Edward Burton Waters, St. Louis, St. Louis College of Physicians and Surgeons.

James Ballance Wood, St. Louis, St. Louis College of Physicians and Surgeons.

Ralph Emerson Youmans, Kansas City, Kansas City University of Physicians and Surgeons.

William Theodore Zeitler, St. Louis, St. Louis College of Physicians and Surgeons. (Zeitler's license to practice in Connecticut has been revoked.)

NEWS NOTES

An ordinance has been introduced in the board of aldermen of St. Louis providing for an increase in the number of municipal visiting nurses. The ordinance calls for an immediate addition of sixteen nurses to the present staff of thirty-four and the addition of ten more nurses each year until there shall be one visiting nurse for each 10,000 of population.

The following have been accepted for New and Nonofficial Remedies:

Benzol Products Co.

Cinchophen—B.P.C.

Hynson, Westcott and Dunning

Antimony Sodium Thioglycollate

Antimony Thioglycollamide

Eli Lilly and Co.

Iletin (Insulin-Lilly) U-10, 10 C.c.

Iletin (Insulin-Lilly) U-20, 10 C.c.

Iletin (Insulin-Lilly) U-40, 10 C.c.

H. K. Mulford Co.

Ampules Solution Pituitary Extract—Mulford, 0.5 C.c.

Iodo-Casein with chocolate

Parke, Davis and Co.

Iron Citrate Green

Ampules Iron Citrate Green—P.D. and Co. 1 1/2 grain

Ampules Iron Citrate Green—P. D. and Co. 3/4 grain

Ampules Iron Citrate Green—P.D. and Co. 1 1/2 grain

Mercurettes

Proposote

Proposote Capsules 5 minims

Proposote Capsules 10 minims

Powers-Weightman-Rosengarten Co.

Tryparsamide

Pure Gluten Food Co.

Hoyt's Protein Cereal

Sharp and Dohme

Tincture Digitalis Purified (Fat Free)—S. and D.

Standard Chemical Co.

Standard Radium Solution for Intreavenous Injection, 5 micrograms Ra

Standard Radium Solution for Intravenous
Injection, 10 micrograms Ra
Standard Radium Solution for Intravenous
Injection, 25 micrograms Ra

OBITUARY

JOSEPH H. STAPP, M.D.

The many friends of Dr. Joseph H. Stapp were shocked to learn of his tragic death at his home in Hardin, Ray county, Friday, December 26, 1924, from the accidental discharge of a shotgun in the hands of his son, Roth V. Stapp. The funeral was held from the home Sunday afternoon, December 28, with interment in the Lavelock Cemetery, near Hardin.

Dr. Stapp, who was widely known in Ray county, was born near Higginsville September 7, 1876, the son of the late Dr. Joseph H. Stapp. He attended the Kansas City Medical College following the completion of his school work at Higginsville and after graduating from the medical school in 1899 practiced at Sibley until 1903. After post graduate work at Rush Medical College, Chicago, he located at Hardin where he practiced until his death. On September 25, 1901, he was married to Miss Emily Childs, of Buckner.

On locating in Hardin Dr. Stapp soon built up a large practice, becoming one of the best known physicians in the county. Several years ago he erected a hospital in Hardin which he was successfully operating at the time of his death. During the World War he volunteered for service and was given the rank of first lieutenant but previous to his discharge he was given the rank of captain. Dr. Stapp was a member of the national, state and county medical societies.

Thus closes a brief history of a life well spent in the practice of his chosen profession. Dr. Stapp unexpectedly received his final call and has gone in answer to the summons of that Great Physician who unerringly diagnoses and administers to each individual case. A true physician practices his profession primarily for the service he may be able to render his fellow men. Dr. Stapp was of this type; ethical in his profession he was loved by his fellow physicians. He died as he had lived—a friend to frail, suffering humanity; always ready and willing to answer all calls of those in pain, disease and distress, his friends were legion.

Folded in death, no longer will his hands administer to the alleviation of suffering; no longer will his brow be knit in anxiety and study of the ailments of those in his care. His

work is finished and we commend him to the keeping of that Omnipotent God who rewards according to deeds done in the flesh. May His blessings bring peace and comfort to sorrowing relatives and friends.

R. L. HAMILTON, M.D.

Secretary, Ray County Medical Society.

ROBERT ROY KEEBLE, M.D.

DAVID S. BOOTH

Dr. Robert Roy Keeble, a member of the Staff of the St. Louis Baptist Hospital, died December 2, 1924, at his home in St. Louis. Born in Wentzville, Missouri, February 1, 1874, Dr. Keeble graduated from the Marion-Sims College of Medicine and practiced his profession in St. Louis for over thirty years.

In 1895, he joined the staff of the Missouri Pacific Hospital in St. Louis and continued there until 1905 when he became consulting physician, severing his connection with the hospital one year later when his entire time was taken up with general practice.

It was during his years of service at the Missouri Pacific Railroad Hospital that the writer had the privilege of an intimate acquaintance with Dr. Keeble and an opportunity to observe his painstaking, thorough and efficient services which were rendered in such a cheerful and kindly manner and displayed such a personal interest as to win him many friends who were faithful to the end and who will regret and mourn his loss.

Dr. Keeble was a member of the staff of the St. Louis Baptist Hospital, a position he had occupied for a number of years, of the Nurses Training School where he was lecturer on medicine and apparently it was a prophetic coincidence that his last lecture just a few days prior to his fatal illness was upon the subject of pneumonia, the disease of which he died.

Dr. Keeble was given to dry jesting and so subtle were his jests as occasionally to confound his most intimate friends.

Dr. Keeble was a member of the St. Louis Medical Society, the Missouri State Medical Association, the Modern Woodman of America and of George Washington Lodge, No. 9, A. F. & A. M.

Dr. Keeble is survived by his widow, Mrs. Belle Keeble, and one son, Walter Keeble.

Funeral services were held at the family residence, December 5, 1924, and were conducted by Rev. Dr. Sharp, of Cleveland, Ohio, who came to St. Louis to officiate. Burial was in Valhalla Cemetery.

"Death is the golden key, that opens the palace of eternity."—The *Bulletin* of the St. Louis Baptist Hospital.

HENRY N. DEMENIL, M.D.

The closing chapter of the year records another death in the ranks of our profession. Dr. Henry DeMenil was summoned by the great Chancellor on December 20, 1924, to undertake the journey from whence no traveler returns.

Death when viewed from a purely physical angle should not be feared by any mortal whose life has been along the lines of accepted principles. The question paramount is this: How is death going to claim its victim? Will life's close be preceded by agonizing suffering, or will a peaceful tranquility bring comfort in the closing hours? To those who have given this matter a thought it is a question to be conjured with.

Let us take for example the death of our colleague. The Christmas holidays were near. There was a festival party of the Quentin D. Roosevelt Post of the American Legion. He was a Legionnaire and so with his wife and three small children he wished to attend this festival. Like all fond fathers his heart was filled with joy at the thought of giving his family an evening of pleasure. It is easy to picture such a happy party going to the festival, and here comes the vagary of the fates. Just as he had entered the building where the happy evening was to have been spent he remarked to his wife, "I feel all in." His arms fell limply to his sides and he collapsed. Death came less than fifteen minutes later. Such a closing chapter in life causes one to wonder, causes one to look into space and think.

Words cannot bespeak the suffering of the wife and the poor children whose joys were supplanted by grief so suddenly. Death came unexpectedly, the doctor through the kind offices of Providence was rendered unconscious. He knew nothing of the suffering of his loved ones, and before they fully realized what had happened he was sailing from the mundane harbor out upon the uncharted seas.

Dr. DeMenil was apparently in the best of health at the time of his death. The summons came to him when he was in his forty-fifth year, an age in the life of a physician when his labors are at their best.

Dr. DeMenil had a most enjoying personality and was very popular both in the profession and in society,—F. R., *Bulletin*, St. Louis Medical Society.

WALTER G. TYZZER, M.D.

As the writer sat in the flower-laden Third Baptist Church at the hour of the funeral listening to the eloquent sermon of Rev. Dr.

Henry A. Porter, who depicted in the most beautiful and sympathetic expressions the life of the deceased physician, he could not help but feel a deep regret that his acquaintance with this man had not been of a closer nature.

Dr. Tyzzler's life work divided itself between two professions, viz., medicine and theology. When in the company of physicians he was regarded as a physician and when in company of the clergy he was regarded as a minister.

In this duoprofession he was broadminded, his strong personality inspiring the trust and confidence necessary to maintain a happy balance.

He joined the Baptist church at an early age and devote himself to Y. M. C. A. and evangelistic work. When he was 26 years old he was leading the music in meetings conducted by Dr. L. Moody and other prominent evangelists.

It was in 1893 that he came to St. Louis as assistant pastor at the Third Baptist Church and director of music. In this office he continued for six years then resigning in order to study medicine. After his graduation he entered into active practice.

His benevolences were generous. He founded two hospitals in foreign countries, viz., The Emily Tyzzler Hospital at Hakka, Burma, in memory of his wife, and the Will Mayfield Hospital in China.

Besides these activities he gave largely to various Baptist congregations in this city for new buildings.

Dr. Tyzzler at the time of his death which occurred November 19, 1924, was chairman of the Board of Deacons of the Third Baptist Church and president of the St. Louis Baptist Association.

In the words of Krishua he could say:

"A man ought to live like a lotus leaf which grows in the water, but is never moistened by water, so man ought to live in the world, his heart to God and his hands to work."—F. R., *Bulletin*, St. Louis Medical Society.

CHARLES W. WILLIAMSON, M.D.

Dr. Charles W. Williamson, of Poplar Bluff, a graduate of Beaumont Hospital Medical College, St. Louis, 1887, died June 5, 1924, aged 62 years.

Dr. Williamson had been a member of Butler County Medical Society for nearly twenty years during which time he took an active interest in the affairs of the society and served as vice-president in 1922. Since that time ill health had prevented his further participation in the activities of the society but his interest never lapsed and his passing is sadly mourned by the medical profession as well as by all who knew him.

THOMAS SKIDMORE FLORANCE, M.D.

Dr. Thomas S. Florance, of Marshfield, one of the pioneer physicians of Webster County, was called from his labors on earth to rest, January 1, 1925. Dr. Florance was born in Webster County November 8, 1853, and with the exception of a few years has lived all his life and practiced his noble profession in Webster County. He was a devoted husband and father and a faithful and conscientious physician. He leaves a widow and five children to mourn his loss.

"Whereas, It has pleased the Supreme Architect of the Universe to call from his labors our beloved member of the Webster County Medical Society, Dr. Thomas S. Florance, who died January 1, 1925, therefore be it

Resolved, That in the death of Dr. Florance his family have lost a devoted husband and father, the Society a faithful member and the community an upright and conscientious physician; and be it further

Resolved, That we will ever bear in grateful remembrance the zeal and fidelity with which Dr. Florance discharged his duties as a physician, and that we will ever try to imitate his zeal and devotion to the principles of our profession; and be it further

Resolved, That a copy of these resolutions be spread upon records, that a copy be sent to the family of our deceased brother and that a copy be sent to the Missouri State Medical Association for publication."

M. HIGHFILL, M.D.

J. L. JOLLY, M.D.

J. R. BRUCE, M.D.

GEORGE BOEMLER, M.D.

Dr. George Boemler, St. Louis, a graduate of Missouri Medical College (now Washington University School of Medicine), 1883, died at Missouri Baptist Sanitarium, St. Louis, January 11, 1925, aged 84 years. His death was attributed to kidney trouble.

Dr. Boemler was born in Beardstown, Illinois. He evinced an early interest in medicine and sought a position in a drug store and began the study of pharmacy. Upon the outbreak of the Civil War he enlisted in Company K, 33d Illinois Infantry. At the close of the war he moved to St. Louis continuing his profession as a druggist. Finding this field too limited for his ambitions he began the study of medicine and after graduating engaged in active practice in St. Louis, continuing until his recent illness forced him to abandon his work.

Dr. Boemler was one of the oldest members of the St. Louis Medical Society both in age and years of membership, and in 1922 was elected an Honor Member by that body. He

was a member of Ransom Post 131, G. A. R., having served as commander and surgeon general of the State of Missouri. For many years he was president of the Board of Stewards of St. Paul's M. E. Church.

Dr. Boemler is survived by his widow, Mrs. Fannie Strother Boemler, to whom he was married in 1870. Their only child, a son, died in early youth.

BONDURANT HUGHES, M.D.

Dr. Bondurant Hughes, of Keytesville, a graduate of Missouri Medical College (now Washington University School of Medicine), St. Louis, 1890, died of heart trouble December 20, 1924, aged 59 years.

Dr. Hughes had been a member of Chariton County Medical Society for sixteen years. That he was loved and respected by all who knew him is evidenced by the following memorial adopted by Chariton County Medical Society:

"Dr. Bondurant Hughes has accomplished his mission, his work is finished, and he has gone to that bourne from which no traveler returns. In going he left a splendid heritage to his family, his community and the medical world as a man and as a physician.

We bow in submission to the will of Him who gave in love and took in love and we shall try not to think of the personal loss but only to have happy memories of one who walked and talked and served with us as a friend and brother.

We extend sincere sympathy to his family, his community and the fraternity; therefore be it

Resolved, That a copy of this memorial be placed on the records of the Chariton County Medical Society and a copy be sent to the family of the deceased."

G. W. HAWKINS, M.D.

J. D. BRUMMALL, M.D.

J. FRANKLIN WELCH, M.D.

GUSTAV H. VOGT, M.D.

It was late on an afternoon in August when the writer stood at the grave of Dr. Vogt, near the son of the deceased, also a physician. This incident brought thoughts of a sad past when the writer passed through a similar cycle of unspeakable gloom. His heart went out to the son for he knew under what painful tension he was laboring. Physicians, by wont of their vocation, become intimately associated with death and in a true philosophic manner can accept the inevitable visitation with considerable mental reservation, nevertheless, when death summons an immediate member of the family,

such an acquired philosophy can not befoget the pangs such a visitation will incite and though the son be a physician, sorrow and grief will find him just as true a victim as any other mortal.

In the passing of Dr. Vogt, St. Louis has lost one of its few remaining powerful general practitioners of the past generation. The good old Doctor will be sadly missed.

There was something pleasingly attractive about his personality. There was a loyalty to friends that nothing could shake and a thoughtful kindness showing itself toward all with whom he came in contact that made him one of the best loved men it has been our good fortune to know.

He has left many friends and an honored memory behind him.—F. R., *Bulletin*, St. Louis Medical Society.

JOHN A. CALNANE, M.D.

The chronicling of the death of a colleague is always a very depressing duty, particularly so when the colleague has been a good and loyal member of the Medical Society.

It is a most deplorable act of fate that the visitation of death upon members of the St. Louis Medical Society should have been so frequent in 1924.

Dr. Calnane is one of the numbers who has been welcomed to the grand circuit of the phantom world and the loss of his unselfish, manly personality is a grievous one to the community, which he had so long and well served.

In his death the Medical Society loses a good and devoted member, attributes that mean much for the welfare of any society.

To those of us who were so fortunate as to know him well and enjoy his love and friendship, the man himself meant more than anything else.

Dr. Calnane died happily as every physician would wish to do. He gave his life as quietly at the end as he had always given it for his fellow-men.—F. R., *Bulletin*, St. Louis Medical Society.

CHARLES EVAN PAXON, M.D.

The following resolution of respect was adopted by the Marion County Medical Society on the death of Dr. Charles Evan Paxon, of Hannibal, Missouri.

WHEREAS, Our local profession has had its ranks again depleted by the recent death of one of our long time members, Dr. Charles Evan Paxon; in his transition his large number of friends and his more intimate associates in this community experience a peculiar loss; he

was capable and companionable with a balanced conception of the profession to which he devoted more than twenty years of his active life, therefore be it

Resolved, That to the surviving members of his family we, as members of Marion County Medical Society, extend our real sympathy in their bereavement, and furthermore record our own appreciation of his intrinsic worth.

MARY S. ROSS, M.D., *Secretary*.

JAMES R. BARTLETT, M.D.

Dr. James R. Bartlett, of Springfield, a graduate of the University of the City of New York, 1883, died January 3, 1925, following a long illness. He was 64 years old.

Dr. Bartlett had been a member of Greene County Medical Society for nearly twenty years.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, FOR 1925

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Benton County Medical Society, October 10, 1924.

Camden County Medical Society, December 29, 1924.

Madison County Medical Society, January 21, 1925.

Montgomery County Medical Society, January 22, 1925.

Clark County Medical Society, January 30, 1925.

Cape Girardeau County Medical Society, February 10, 1925.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

One Hundred and Eighth Meeting, December 8, 1924

1. PRESENTATION OF CASES.

A. A CASE FOR DIAGNOSIS.—By DR. A. D. CARR.

B. A CASE OF SICKLE CELL ANEMIA.—By DR. ALFRED GOLDMAN.

A colored male, aged 24, with the following history: At the age of 12 had swelling and pain of knees and wrists lasting 2 years. At the same time noticed yellowness of eyes. At 16 developed ulcers on both legs which have persisted off and on since. Has had swelling of ankles for a year.

Physical Examination: Fairly well developed. Green discoloration of sclerae. Heart: Enlarged to left, rough systolic murmur at apex. Also pulmonic. Liver: Slightly enlarged. Spleen: Not felt. Legs:

Ulcers of both legs over tibiae, punched-out, granulating.

Laboratory: Blood: RBC 2,000,000. WBC 12,000. HB. 55 per cent. Platelets, 330,000. Smear shows large number of sickle, oat-shaped and ovoid cells; anisocytosis; normoblasts; few megaloblasts. Bleeding time, 2 minutes. Clotting time, 4½ minutes. Fragility test: Control: Began at .38 per cent, hemolysis not complete at .28 per cent. Wassermann negative. Reticulated cells about 25 per cent.

Urine: Bile test faintly positive, urobilin, faintly positive.

Diagnosis: Sickle cell anemia.

Family History: No relatives available for study.

DISCUSSION

DR. ALEXANDER: When the case entered the hospital we realized at once that it was unusual from the description given in literature on the subject. Another case in the hospital, Dr. Goldman saw two years ago. Until two years ago there were only four cases on record, and then it was finally discovered by Sydenstricker in Atlanta, Ga., that a great many members of some families are so afflicted, showing it to be a hereditary disease. Huck, in Baltimore, discovered another family. It is rather interesting in these rare cases to find 30 cases or so at one time. Furthermore, it proves that these cases are much more frequent than suspected. The main features of the disease are a peculiar blood picture and particularly the symptoms of weakness, fatigue, and other accompaniments of the process of anemia. The spleen is not palpable. Another interesting point is the persistence of leg ulcers, which is a very common occurrence. There was rather interesting experimental work done on blood. The question comes up, as to whether the peculiarity in the blood is due to the cells themselves, or to the serum of the blood—and by taking the cells and washing them and putting them with the normal serum and taking the normal cells and putting them with those of patients with sickle cell anemia, it is apparent that the cause of altered shape lies in the blood cells themselves, and not due to the influence of the serum on the cells. These forms have been found in the bone marrow. The peculiar thing is that when you first take the blood, it presents a somewhat altered picture, but if kept fresh for 24 hours and kept moist, in many cases 99 per cent of the cells will assume a sickle form and in such cases, by keeping the blood standing outside the body, these sickle cells form slowly. One thing is present in this case: A change in the appearance of the sclera. Treatment is entirely symptomatic.

DR. THOMPSON: I wish to correct the impression that Dr. Goldman gave when he said that he had observed phagocytosis. A careful search was made but we have been unable to demonstrate any phagocytosis. Another thing of interest is the tendency toward basic staining property of these cells.

DR. STRAUSS: When the patient was referred to the hospital it was thought that he was a case of familial hemolytic jaundice because of the severe grade of anemia, the marked jaundice and absence of bile in the urine, and because no mention was made of the finding of sickle cells in the smear made at that time. Now that the diagnosis of sickle cell anemia has been made I would like to ask if it has been possible to elicit a history of admixture of white blood in this patient's family? In the reported cases such admixture of white blood is the rule.

DR. DREW LUTEN: There was a mulatto in the old hospital who subsequently came here, whose case

was reported by Dr. Meyer and Dr. Cook. This was one of the four early cases to which Dr. Alexander refers. She was much more distinctly a mulatto than the present case.

DR. EVARTS GRAHAM: Was there a splenectomy done, and with what results?

DR. ALEXANDER: A splenectomy was suggested, but not done.

DR. D. P. BARR: In a case reported by Sydenstricker an autopsy was done and disease of the spleen was found. It was atrophic, the malpighian bodies and the pulp of the spleen were greatly diminished in amount. It was also found that an extract of the spleen had hemolytic properties. After observing 40 cases Sydenstricker suggested that a splenectomy might be of benefit.

DR. J. E. COOK: This case of sickle cell anemia is the second treated here. Dr. Jerome Meyer and I reported the other ten years ago. This case is well enough now. Aside from suffering from rather severe anemia, these patients get along pretty well but occurring in infancy it takes a heavy toll, because children so afflicted are subject to those diseases which attack those who are weakened—tuberculosis particularly. I do not know of any investigations of this condition in infancy except those done in the South. All other cases reported previously were in adults who have gotten along over a long term of years without any other discomfort than is common to somewhat anemic individuals. The case reported 10 years ago is in good shape now. An intercurrent infection, a thrombophlebitis two years ago, does not seem to have been attributed to her anemia.

2. THE EXCRETORY FUNCTION OF THE GALL BLADDER.—By Drs. S. KODAMA AND EVARTS A. GRAHAM.
3. RELATION OF THE GASTRIC CONTENT TO THE PHYSIOLOGY OF THE SPHINCTER OF ODDI.—By DR. WARREN H. COLE.

While working upon the visualization of the gall bladder with sodium tetrabromophenolphthalein numerous attempts were made to produce a denser shadow and still use the same dose. It seems very probable that concentration of the dye within the gall-bladder would be considerably augmented by contraction of the sphincter of Oddi at the duodenal end of the common duct, with a resultant stasis of bile and dye in the biliary system. It was found that when the gastric mucous membrane of a dog was exposed to the action of alkali (.5 per cent sodium hydroxide), the sphincter of Oddi would contract. The amount of contraction can be measured by attaching a manometer with rubber tubing to a cannula which is inserted into the common duct toward the duodenal end. The contraction of the sphincter resulting from application of .5 per cent sodium hydroxide will withstand a pressure of 150 to 250 mm. of water. Application of .5 per cent hydrochloric acid reduces the pressure required to break through the sphincter to 50 or 60 mm. of water. The normal pressure, or pressure required to break through the sphincter, when the stomach is empty, varies between 20 and 60 mm. of water. Application of 20 per cent magnesium sulphate causes relaxation of the sphincter equal to a pressure of 20 to 40 mm. of water. Distention of the stomach with water or any other fluid produces a marked spasm of the sphincter of Oddi equal to a pressure of 200 to 250

mm. of water. Attention has been directed by many writers to the duodenal control of the sphincter of Oddi, but no reference has been found in the literature in regard to the control of the sphincter by the gastric contents.

DISCUSSION

DR. LARIMORE: This has been an interesting paper. Measuring the tonus of the sphincter in its relation to the hydrogen ion concentration in the stomach, and hence the relation of the gastric acidity to the flow of bile into the intestine is of great interest in clinical considerations. So far we have been working in our clinical observations of the sphincters of Oddi as to the influence of duodenal conditions rather than of gastric conditions.

DR. FRANK D. GORHAM: Dr. Cole is to be congratulated upon the pioneer work he has been doing. This apparent influence of the gastric contents upon the activity of the Ampulla of Vater, may be compared to other phenomena. For example, the acid control of the pylorus as claimed by Cannon. If possible it would be interesting to make similar studies where there was a gastric achylia, where clinically there is no reason to believe that the function of the Ampulla of Vater is materially affected.

DR. GRUBER: In the Department of Pharmacology each year students are requested to repeat some interesting and original experiments that have appeared in the literature, as one of their regular experiments in the course. As I recall, Mr. Matthey and Mr. Christopherson and some other members of their class performed an experiment similar to these of Dr. Cole's. They cannulated the gall bladder after ligation of the hepatic duct. They noted the rate of flow of acacia-Ringer's solution through the cystic and common ducts by the disappearance of the fluid in a burette. A temporary stoppage after the intravenous injection of pilocarpine and physostigmine was observed. Atropine hastened the flow i.e. the fluid disappeared more rapidly from the burette, it left almost in a steady stream. I should like to ask Dr. Cole whether or not he thinks the movement of the bile in the tube is due only to extraneous factors because Macht found peristaltic movements in the exercised strips of the gall bladder. These strips reacted to the same drugs that act upon the other organs containing smooth muscle.

DR. H. L. WHITE: It seems more probable to me that the controlling factor is a hormone. I should like to ask Dr. Cole if he has made any observations on the action of secretin on the sphincter. Also if he has determined whether or not the effects which he has described persist after section of the vagi.

DR. GRUBER: Dr. Macht observed rhythmic contractions in the excised gall bladder, but as far as I know not in situ.

DR. COLE: This paper deals almost entirely with the relation of the gastric contents to the action of the sphincter and it is the gastric side of the question that we are interested in. I had a conversation a few months ago with Dr. Mann, of Rochester, who is one of the pioneers in the study of the gall bladder and sphincter of Vater. He had tried experiments with dogs in the effort to control the sphincter by the intravenous action of drugs, but could not control it with any constancy.

Dr. Gruber states his experiments were conducted with the cannula in the gall bladder. This brings into the experiment an opportunity for erroneous results on account of the valves in the cystic duct. Our first results were conducted this way, but such huge discrepancies were obtained that the results were discarded. In regard to Dr.

White's question, I did not intend to suggest the control of the sphincter by a nervous mechanism to be conclusive, because I have no proof. It may be controlled by hormonal action instead. I have not tried the effect of cutting the vagus or injection of secretin and do not know what action either might have.

4. EXPERIMENTAL SURGERY OF THE MITRAL VALVE: ELECTROCARDIOGRAPHIC STUDIES DURING OPERATION.—By Drs. ALLEN AND P. S. BARKER.

BATES COUNTY MEDICAL SOCIETY

The Bates County Medical Society held its regular monthly meeting at the Courthouse in Butler, at 3:30 p. m. February 5. There were in attendance the following: Drs. G. C. Bates, of Adrian; H. A. Rhoades, of Foster; J. S. Newlon, T. F. Lockwood, T. W. Foster, E. N. Chastain and George H. Thiele, of Butler.

The resolutions adopted by the Saint Louis Medical Society relative to the prescription of alcohol by the profession, was unanimously passed and the secretary instructed to inform both the Saint Louis Medical Society and our representatives in the House and Senate of that fact.

Dr. Herbert A. Rhoades, of Foster, was elected president for 1925 and Dr. George H. Thiele re-elected secretary of the society.

The chair appointed Drs. Lockwood, Thiele, and Newlon to draw up resolutions in memory of Drs. Wm. Reynolds, of Rockville, and Charles E. Powers, of Butler, both of whom died during 1924.

It was decided to hold our regular monthly meeting the last Thursday of each month and further decided that we should have Kansas City or Saint Louis men present papers at every meeting.

Drs. T. W. Foster, of Butler, and T. B. Todd, of Adrian, were chosen delegates and alternate, respectively, to the State Association meeting at Kansas City in 1925.

Dr. E. N. Chastain introduced a motion that the chair appoint a committee to draw up a resolution to be presented before the State Society at its next meeting, to make a provision for the care of dependent physicians. Motion carried.

The first paper on the program was a report of the vaccination of 140 children against scarlet fever by Dr. H. A. Rhoades, of Foster. Dr. Rhoades' conclusions were well drawn. They were that he was unprepared to say that vaccination was of prophylactic value, but that it had apparently protected exposed children in the same family with those sick with scarlet fever. He cited one patient who took sick with scarlet fever three weeks after having been vaccinated.

Dr. Gerald C. Bates, of Adrian, discussed the subject of eclampsia. He cited two cases. His discussion was very complete and led to a general discussion with citation of cases and treatment by several of those present.

After the business session the Society adjourned to a fine banquet at which fifteen were present.

This meeting was one of the most interesting we have had and we hope for better attendance in the future.

GEORGE H. THIELE, M.D., Secretary.

COOPER COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Cooper County

Medical Society was held in the parlors of St. Joseph's Hospital, Boonville, Dr. A. L. Meredith, Prairie Home, presiding. Eight members were present, a good representation considering the roads.

Two new applications for membership were read and the society accepted the applications of the following for membership: Dr. J. F. Potts, Boonville; Dr. W. E. Stone, Boonville.

On motion by Dr. R. L. Evans, duly seconded, the present officers were reelected for the ensuing year. Dr. R. L. Evans was elected as delegate to the State Meeting, Dr. A. L. Meredith, alternate.

Dr. W. E. Stone read a very interesting paper on "Endocrins in Pregnancy," before the Medical Society and the hospital staff in joint session. A general discussion of the paper was very interesting as well as instructive.

Dr. P. A. Brickey was called upon for a paper on "Hospital Records," to be read before the next meeting on February 3.

A report made to the Society by the secretary of the hospital staff showed the cases treated as follows: 581 patients during 1924 with a death rate of 4.3 per cent.

There being no further business the meeting adjourned and all present enjoyed a delicious luncheon served by the Sisters.

P. A. BRICKEY, M.D., Secretary.

HOLT COUNTY MEDICAL SOCIETY

The Holt County Medical Society met in Dr. Chandler's office, in Oregon, Thursday, January 8. This was the first quarterly meeting of this year and election of officers took place. The results were as follows: President, Dr. J. L. Cox, Fortescue; vice-president, Dr. E. F. Kearney, Oregon; secretary-treasurer, Dr. J. F. Chandler (reelected), Oregon; delegate to the meeting of the State Association, Dr. F. E. Hogan, Mound City.

Much enthusiasm was shown by those present. The outline of the work for the ensuing year gives promise of much good to be accomplished by the Society.

Dr. Kearney, deputy state commissioner of health, gave a very interesting talk on preventive medicine and reported action taken in his efforts to prevent the spread of contagious diseases existing throughout the county. His subject was discussed by Drs. Cox and Wood.

Dr. Cox gave a very interesting talk on the common diseases of childhood. Subject discussed by Drs. Chandler, Wood and Kearney.

Dr. Chandler read two original poems, "He Got What He Deserved," and "Santa and the Doctor."

A talk, "For the Good of the Order," was given by Dr. Bullock, and discussed by all present.

Next meeting of the Society will be at Forest City, first Thursday in April.

JNO. F. CHANDLER, M.D., Secretary.

The verses, "He Got What He Deserved," follow:

HE GOT WHAT HE DESERVED

The night was cold and dark and dreary.
The doctor slept, for he was quite weary.
The telephone rang, a call from a man
Who had never paid the doctor and
Who never prepared for a turn of the tide.
The turn had come, the tide was in.
The Doc had served him, time and again.
The story is old, yet sad to tell
The doctor slept and the man went to ———.

There is a moral to the tale just told.

It is this: (If you would be sure of your soul)

Pay the doctor before the bill gets old.

Or you may enter the place untold.

J. F. C.

JASPER COUNTY MEDICAL SOCIETY

The Jasper County Medical Society held its second meeting for 1925, Tuesday evening, January 20, at the Joplin Y. M. C. A., the president, Dr. H. D. McGaughey, in the chair. Members present were: Drs. Barson, Clinton, Shelton, Lowdermilk, Neff, J. A. Chenoweth, S. H. Miller, Thornton, McGaughey, S. A. Grantham, Mack, Hornback, Balsley, Tyree.

Dr. R. A. Thornton was reelected to membership.

A letter from the secretary of the State Association detailing proposed legislative program of the Association was read and approved. A motion was passed to assess each member \$3.00 to be given to the State Association in aid of its legislative activities.

A letter from Dr. Chapman asking for transfer from Newton County Society was read. The secretary was instructed to ask Dr. Chapman to furnish a transfer card from his county society.

Dr. H. D. McGaughey reported on a case of general carcinomatosis; Dr. J. I. Tyree, on duodenal erosions; Dr. S. A. Grantham, on streptococcemia. Drs. Chenoweth, Grantham, Neff, Thornton, Shelton, entered into the discussion.

Meeting of January 27, 1925

The Jasper County Medical Society held its third regular meeting for the year 1925, Tuesday, January 27, at eight o'clock p. m. in the Joplin Y. M. C. A., the president, Dr. McGaughey, in the chair. Members present: Drs. McGaughey, Powers, R. M. James, Gregg, L. C. Chenoweth, Clinton, Hornback, Barson, Tyree, S. H. Miller, Mack, Shelton, Alberty, and Neff. Total, 14.

Dr. Barson read a very interesting essay on syphilis of the alimentary tract and reported two very instructive case histories.

Dr. Clinton reported a case of infection of the liver. Both cases were discussed thoroughly.

A resolution offered by Dr. L. C. Chenoweth, commending Representative Warden for his interest in legislation affecting the public health and expressing the thanks of the Society for his work to date, was adopted.

Dr. R. M. James invited the members of the Society to attend the meeting at the Joplin High School, February 6, to hear the report of the school survey made last fall.

Meeting adjourned.

JAMES I. TYREE, M.D., Secretary.

PETTIS COUNTY MEDICAL SOCIETY

The Pettis County Medical Society met in regular session at Hildebrandt's Cafe at 6:30 Monday evening, February 16, President D. E. Shy presiding. The following members were present: Drs. Beckemeyer, Bess, Bohling, Bishop, Dyer, Ferguson, Jones, Long, Love, McNeil, Mitchell, Monroe, D. E. Shy, M. P. Shy., Walter, Boger, Bradford, and Carlisle.

Following the dinner the meeting was called to order by Dr. Shy. Dr. Geo. B. Norberg, of Kansas City, was the speaker of the evening and talked on "The Diagnosis of Pelvic Conditions." The talk was

a very good one and was enjoyed by every member present. Considerable discussion followed after which a vote of thanks was given Dr. Norberg for coming down.

There being no further business the meeting was adjourned.

JNO. B. CARLISLE, M.D. Sec'y.

STODDARD COUNTY MEDICAL SOCIETY

The Stoddard County Medical Society met in Bloomfield, Wednesday evening, January 7. The following were present: Drs. T. C. Allen, Bernie, president; E. L. Elmore, Puxico; J. M. Page, Puxico; E. Phillips, Bloomfield; S. S. Davis, Bloomfield; Frank Larue, Dexter; W. C. Dieckman, Dexter.

After reading the minutes of the previous meeting, the Society proceeded to elect new officers for the coming year and the following were elected: Dr. Frank Larue, Dexter, president; Dr. E. Phillips, Bloomfield, vice-president; Dr. W. C. Dieckman, Dexter, secretary; Dr. S. S. Davis, Bloomfield, treasurer; Dr. Frank Larue, delegate to the meeting of the State Medical Association; Dr. J. L. Craig, Dexter, alternate delegate. Dr. T. C. Allen, the retiring president, was appointed censor by the president, Dr. Larue.

Owing to the lateness of the hour the scientific program was dispensed with and the Society adjourned to meet in Dexter on the first Wednesday evening in February.

This Society has held regular meetings during the entire year and held one joint meeting with the New Madrid County Medical Society in November at Morehouse which was well attended by physicians from both counties.

The Society has employed attorneys to prosecute irregular practitioners in the county and has succeeded in making several Chiropractors move from Stoddard county. This campaign is still active and further steps will be taken in the future as needed.

W. C. DIECKMAN, M.D., Secretary.

WRIGHT-DOUGLAS COUNTY MEDICAL SOCIETY

The Wright-Douglas County Medical Society met at 2:00 p. m., Thursday, February 5, in the office of Dr. E. C. Wittwer at Mountain Grove, with the following members and invited guests present: Drs. E. C. Wittwer, H. G. James, F. B. Dailey and A. C. Ames, of Mountain Grove, R. A. Ryan, of Norwood, T. O. Klingner, of Springfield, J. W. Phemister and J. R. Womack, of Houston, J. C. B. Davis, of Willow Springs, J. P. Cavalier, of Cabool, and dentists N. J. Scott, J. C. Manning and H. H. McGee, of Mountain Grove.

The first on the program was a clinic conducted by Dr. Klingner, in which several cases were examined where there was an involvement of the nasal sinuses and some minor operations were performed.

The meeting was then called to order by the president, Dr. E. C. Wittwer, and the minutes of the last meeting were read and approved.

Dr. Klingner read a paper on "Chronic Sinusitis," which proved very instructive and was discussed by most of those present.

Others who were on the program were either absent or unprepared, so their subjects were not taken up.

The subject of medical legislation was considered and it was the unanimous opinion that we should

urge upon our representatives and senators at Jefferson City our belief that they should support the bill introduced by the State Medical Association, and oppose that which would forbid physicians to use alcoholic liquors in their legitimate practice.

The subject of organizing a Woman's Auxiliary was considered and the president was authorized to appoint a woman to effect such an organization in Wright and Douglas counties.

The meeting adjourned at 4:30 to meet at Norwood the first Thursday in May, at which time it is hoped that the members will all bring their wives and that the Woman's Auxiliary may be organized.

A. C. AMES, M.D., Secretary.

BOOK REVIEWS

LES TROUBLES FONCTIONNELS DU COEUR. Par R. Lutembacher. 1 volume de 520 pages avec 297 figures. Masson et Cie, editeurs. Paris, France. Prix 45 fr.

This monograph presents what would be understood as the physiology of cardiac disease, rather than what American students would designate functional heart disturbances, as the title indicates. It is an extremely scholarly résumé of the present century's conception of cardiac pathology. The first chapter describes the anatomy and physiology of the heart, with most illuminating illustrations of the endocardium and the myocardium. Methods of examination of the heart, first: Clinical methods (anamnesis, palpation, percussion, auscultation); second: Methods of precision (radioscopic, sphygmometric, sphygmobolometric, viscometric, polygraphic, and electrocardiographic) are then considered. Capillaroscopy is mentioned but not described. A detailed account of extrasystoles, paroxysmal tachycardia, flutter, heart block and other such neuromuscular derangements are given. The reproductions of electrocardiograms are excellent. The circus movement theory of flutter and fibrillation is regarded as still *sub judice*. Cardiac insufficiency and angina are then analyzed. Nearly the last half of the book is given up to the effect of different drugs upon the heart. Few American physicians would subscribe to the enthusiasm the author entertains for quinine.

The book is however a most interesting and complete presentation of the general subject of cardiac disease as viewed by modern clinical physiologists.

L. C.

SAFEGUARDING CHILDREN'S NERVES. A Handbook of Mental Hygiene. By James J. Walsh, M.D., Ph.D., Sc.D., Professor of Physiological Psychology, Cathedral College, New York, and John A. Foote, M.D., Professor of Diseases of Children, Georgetown University Medical School, Washington, D. C. With a foreword by Honorable Herbert Hoover. Philadelphia and London. J. B. Lippincott Company. Price \$2.00.

The authors have written a book which is unique and thoroughly interesting and valuable to both physician and parents. The style is delightful and the chapter headings and subject matter throughout show a familiarity with the literature of all time.

That there is a place for a book upon this subject is recognized both by the fact that there are so many "nervous" children and parents in our modern complex life, especially in America, and because, with the rapidly growing number of physicians who treat children as a specialty, the profession needs

to be well informed in this hitherto somewhat neglected side of child study. The nervous and spoiled child, the influence of heredity and environment, the importance of proper eating and nutrition, the necessity for discipline, the training in correct habits, and many other phases of the question needed to be considered in the handling of the child in the home and by the physician are considered in a broad and effective manner.

Throughout the book emphasis is placed upon keeping the normal child from developing nervous tendencies, or of correcting them early when treatment is easiest of accomplishment. The reviewer recommends that parents, medical students, physicians, teachers, read this book as a foundation for acquiring a knowledge of child psychology and its influence upon the care and proper understanding of the child of today. F. C. N.

THE FOUNDATION OF HEALTH. A Manual of Personal Hygiene for Students. By Wm. Barnard Sharp, S.M., M.D., Ph.D., Professor of Bacteriology and Preventive Medicine in the Medical Department of the University of Texas, Galveston, Texas. Illustrated. Lea & Febiger. Philadelphia and New York. 1924. Price \$2.50.

This really excellent little book aims, according to the author, "not only to outline hygiene practices, but also to show how the functions of the body are affected thereby." The chapters on the functions of the skin, the mental processes, physical exercise and the modern health movement can be particularly commended.

One might desire the inclusion of a few more discussions of a practical nature. Thus the paragraph on the treatment of burns might well be amplified with the substitution of more modern applications than the time honored Carron oil. More adequate space seems indicated for the important subjects of hookworm, for the prophylaxis of "common colds," and for the dangers of the present defiance of the prohibition law in this country. The scattered paragraphs on cancer might be logically grouped in a more comprehensive survey of the subject.

As a whole this book can be recommended as an intelligent summary of the present-day status of hygiene and as a safe guide to students and teachers alike. P. S. L.

A MANUAL OF OBSTETRICS. By John Cooke Hirst, M.D., F.A.C.S., Associate Professor of Gynecology and Obstetrics, Graduate School of Medicine, University of Pennsylvania. Second edition, entirely reset with 229 illustrations. Philadelphia and London. W. B. Saunders Company. 1924. Price \$4.50 net.

The first edition of this manual of obstetrics was published in 1918 and has enjoyed a popular place in obstetric literature on account of the attitude of the author toward the newer trend of teaching the subject, and a new edition is welcomed. The subject matter has been carefully revised and entirely reset.

Description of the mechanism of labor has been carefully and graphically presented and well illustrated.

Pelvic deformities are given with a classification calculated to impress the outstanding facts on the mind of the student, to whom the manual is especially dedicated. The chapter on forceps goes especially into the indications and contra-indications for the instrument, which Blundell called the most use-

ful surgical instrument ever invented, but which the author counters by very properly saying it is the most dangerous of all obstetric instruments in unskilled hands.

In the new edition are noted the sugar test for early pregnancy, the Rubin test for pneumoperitoneum, glucose in toxemia, technic of Potter's version, the treatment of puerperal psychoses, repair of the perineum, placenta accreta, anesthetics in labor, etc., in this manner bringing the discussion of all the recent material vividly before the reader. The physician as well as the student will find the manual a treasure in his daily practice. G. C. M.

CLINIQUES DERMATOLOGIQUES. Professeurs dans les Hôpitaux de Paris (La Rochefoucaud, Broca, Pascal-Saint-Louis) et à la Faculté de Médecine de Strasbourg par le Docteur L. Brocq. 1 volume in 8 de 740 pages avec 54 figures. Masson et Cie, éditeurs, 120 Boulevard St. Germaine, Paris, Vie, France. Prix 60 fr.

The name of Brocq is synonymous with that of the best dermatological work on the Continent and in this volume, which is a collection of lectures on dermatology, the learned and versatile author presents his latest views in his usual brilliant and clear-cut manner.

The first chapter is devoted to a résumé of his conception of dermatoses in general, the second, to the principles of diagnosis, with an exhaustive analysis of the nature of the elementary lesions of the skin, simple and complicated.

His comments on examination and diagnosis will prove a revelation, even to experienced dermatologists.

The section on cutaneous reactions also is very valuable and thought provoking.

It is unfortunate that there is not some method whereby books of this type could be rendered more accessible to the average English reader. R. L. S.

DISEASES OF THE CHEST. And the Principles of Physical Diagnosis. By George Wm. Norris, A.B., M.D., Professor of Clinical Medicine in the University of Pennsylvania; Visiting Physician, to the Pennsylvania Hospital; and Henry R. M. Landis, A.B., M.D., Director of the Clinical and Sociological Department of the Henry Phipps Institute of the University of Pennsylvania. With a chapter on the electrocardiograph in heart disease by Edward B. Krumbhaar, Ph.D., M.D. Third Edition, revised. Philadelphia and London. W. B. Saunders Company. 1924. Price \$9.50 net.

This latest edition of a now well known text has been carefully revised and much enlarged, and several "rare conditions, formerly omitted, are now introduced." The text is one of the best in English on physical diagnosis. The "philosophy" of physical diagnosis, that is the explanation given for the mechanics and causes of physical signs, is, in the reviewer's opinion, the most reasonable and sensible of that in any single book. An invaluable feature is found in the numerous photographs of frozen cadavers sawn into cross section planes to illustrate gross pathology. The great value of these plates can be realized when it is remembered that the anatomical relationship of intrathoracic disease is, in many instances, entirely vitiated when the ordinary autopsy is performed; with the entrance of air into the pleural cavity and the collapse of the lungs the true morphology of pleural fluids, lung abscess and cavities, aneurysms and many other things is

changed. Only by freezing the body and sawing it into sections can these relationships be preserved in situ.

It is interesting to observe the many researches recorded as constantly going on in the field of physical diagnosis, science which like anatomy was created almost at one time, from 1761 to 1850, and almost in a complete state. If the student reads Auenbrugger's treatise on Percussion (1761), Laennec's on Auscultation (1819) and the paper of Corrigan on aortic regurgitation (1832), he will feel that there is hardly anything to be added to physical diagnosis. What there was must seem to have been made up in the treatises of Skoda, Traube and Stokes (1854). And yet, the trained physical diagnostician reading Norris' and Landis' last edition must be struck with the constant stream of contributions being made to the subject. This is of course, exclusive of such instrumental methods as the X-ray, the electrocardiograph, and even the sphygmomanometer. Just to record a few: Wenckenback's studies on the conformity of the chest (1920); Tasker's observations of percussion in the lateral position (1921); Groedel's, Kronig's, and Williams' contributions to lung percussion in tuberculosis; Sewall's very important pronouncements on the whispered voice (1915); Many studies of the subcrepitant rale in tuberculosis, the importance of auscultation after cough, etc.; Parach's explanation of metallic tinkle (1910), the significance of the sounds of aortitis (also the result of numerous worker's observations). Most valuable of all perhaps, and a piece of work which the present volume to its discredit minimizes, is Pottenger's work on inspection and palpation. Pottenger really should be recognized as much the father of palpation as Laennec was the father of auscultation.

When we add to these the immense insight into disease as well as exact methods of measurements gained by the X-ray, the electrocardiograph, the sphygmomanometer, the calorimeter and the measurement of vital capacity, we realize that physical diagnosis is a living, breathing, growing science, maintaining its place as the foundation of all methods of clinical investigation—the supreme art which a physician must learn—to use his eyes, his ears and his fingers. L. C.

THE COMMON NEUROSES. Their Treatment by Psychotherapy. By T. A. Ross, M.C., F.R.C.P.E., Medical Director, Cassel Hospital for Functional Nervous Disorders. London. Edward Arnold & Co. 1923. American Branch, Longmans, Green & Company, New York. Price \$4.20 net.

Dr. Ross is essentially a general practitioner who has learned by experience the astonishing prevalence of the psychoneuroses. The book is directed especially to the general practitioner, by whom the writer thinks the great bulk of psychoneuroses can be successfully treated. The writer modestly disclaims completeness, on account of the limited range of his experience, but as a matter of fact the principles he develops are applicable to the entire field of the psychoneuroses.

Dr. Ross' attitude in regard to the various methods and schools of treatment is expressed in his own words. He says he "has come to the conclusion that not in one but in a judicious selection from many methods will the key to the successful treatment of functional nervous disorders be found." His point of view and preferred methods approximate most closely those of Dejerine.

The book is a typical example of the individualistic tendencies of British medical men. It is a one-man book, evidently written out of an experience which though it may be limited in range, is yet deep. There is not a single conclusion which impresses one as a rescript of the literature. The classification follows its own lines but is clear and just as logical as any other grouping in the same difficult field.

The book fulfills its purpose admirably and can be recommended to every physician. E. T. G.

OUTLINES OF INTERNAL MEDICINE. For the Use of Nurses and Junior Medical Students. By Clifford Bailey Farr, A.M., M.D., Director of Laboratories, Pennsylvania Hospital, Department for Mental and Nervous Diseases; Formerly Associate in Medicine, University of Pennsylvania. Fourth and revised edition. Lea & Febiger. Philadelphia and New York. 1924. Price \$2.75.

This is a manual for nurses and is well illustrated. It is designed as a brief and clear statement of the essentials in etiology, signs, symptoms and information concerning treatment, especially prophylaxis of medical cases. The author has wisely eliminated technicalities of pathology, diagnosis and etiology. The various systems of the body are studied with the types of diseases most frequently affecting them. The illustrations are well chosen and descriptions well written and well proportioned. The text recommends itself as an excellent guide to nurses and nurses' lecturers. W. A. M.

HUMAN CONSTITUTION. A Consideration of its Relationship to Disease. By George Draper, M.D., Associate in Medicine at Columbia University, New York City. Philadelphia and London. W. B. Saunders Company. 1924. Price \$7.50.

This volume deals with an exact method for studying the morphology of human beings, stresses correct technique in the standard mensuration of habitus and attempts to analyze human disease or susceptibility by the application of strict anthropological methods. It seeks to connect the machinery of growth, the mechanism that gives the human body its shape, texture and constitution with its liability to disorder, namely disease. By thus analyzing one's anatomic panel it attempts to develop preventive medicine for the individual as well as attempting to select an individual for a more or less specific vocation in life.

The author and his coworkers are to be congratulated upon offering such an excellent textbook and reference work for the use of students of biology. They are deserving of much credit for stressing correct mensuration in the study of the anatomic panel instead of resorting to body contour or eye examination which is quite unreliable, and for their anthropometric technique, especially of the teeth, palate and profile.

This excellent reference work is highly recommended for all students of the human body and its ailments. A. C. C.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

DIPHTHERIA TOXIN ANTITOXIN MIXTURE 0.1L+ (Gilliland).—A diphtheria toxin antitoxin mixture (see New and Nonofficial Remedies 1924, p. 299), each C.c. of which represents 0.1L+ dose of diphtheria toxin neutralized with the required amount of diphtheria antitoxin. Marketed in packages of three 1 C.c. ampules; in packages of thirty 1 C.c. ampules; in packages of three 1 C.c. syringes; and in ampules containing respectively 10 C.c., 20 C.c., and 30 C.c. Gilliland Laboratories, Ambler, Pa.

MALLINCKRODT TETRABROMPHENOLPHTHALEIN SODIUM SALT.—A brand of tetrabromphenolphthalein sodium—N. N. R. For a discussion of the properties, actions, uses and dosage, see *Jour. A. M. A.*, Dec. 27, 1924, p. 2095. Mallinckrodt tetrabromphenolphthalein sodium salt is supplied in 5 Gm. ampules. Mallinckrodt Chemical Works, St. Louis. (*Jour. A. M. A.*, Jan. 3, 1925, p. 37.)

BACILLUS BULGARICUS-SQUIBB.—A culture of *Bacillus bulgaricus*, marketed in tubes, each containing 12 C.c. *Bacillus bulgaricus*-Squibb is designed for internal administration and for direct application to body cavities, abscesses and wounds. See "Lactic Acids-Producing Organisms and Preparations," New and Nonofficial Remedies, 1924, p. 169. E. R. Squibb and Sons, New York.

NEOROBIN.—A product obtained by the reduction of the actions and uses of Neorobin are the same as those of chrysorobin chrysarobin. It is claimed that neorobin is somewhat more active than chrysarobin and that its staining qualities are less than those of chrysarobin. Like chrysarobin, neorobin is used in the treatment of skin diseases, especially in psoriasis. It is used in the form of ointments which must be freshly prepared. Neorobin is marketed in vacuum sealed tubes containing 1 and 5 grains, respectively. H. K. Mulford Co., Philadelphia.

INTRACUTANEOUS TUBERCULIN FOR THE MANTOUX TEST.—A preparation of Tuberculin Koch (New and Nonofficial Remedies, 1924, p. 309) marketed in packages of one vial containing physiological solutions of one vial containing 0.0001 gm. tuberculin "O.T." accompanied by a vial containing physiological solution of sodium chloride sufficient to make 1 C.c. Lederle Antitoxin Laboratories, New York. (*Jour. A. M. A.*, Jan. 10, 1925, p. 119.)

TABLETS BENZYL FUMARATE-ABBOTT, 5 grains.—Each tablet contains 5 grains of benzyl fumarate—Abbott (*Jour. A. M. A.*, July 24, 1924, p. 41). The Abbott Laboratories, Chicago.

AMPULES SOLUTION PITUITARY EXTRACT-MULFORD, 0.5 C.c.—Each ampule contains 0.5 C.c. of pituitary solution—Mulford (New and Nonofficial Remedies, 1924, p. 229, H. K. Mulford Co., Philadelphia. (*Jour. A. M. A.*, Jan. 17, p. 203.)

OVARIAN SUBSTANCE—L. and F. Desiccated.—The entire fresh ovary of the hog, freed of extraneous matter, dried and powdered without the addition of diluent or preservative. For a discussion of the actions and uses of ovary preparations, see New and Nonofficial Remedies, 1924, p. 220. The product is marketed in 2 and 5 grain capsules and in 2 and 5 grain tablets. Lehn and Fink, Inc., New York.

OVARIAN RESIDUE—L. and F. Desiccated.—The residue from the fresh ovary of the hog, after removal of the corpus luteum, dried and powdered without the addition of preservative or diluent. For discussion of the actions and uses of ovary preparations, see New and Nonofficial Remedies, 1924, p. 220. The product is marketed in the form of 5 grain capsules and 2 and 5 grain tablets. Lehn and Fink, Inc., New York.

CORPUS LUTEUM—L. and F. Desiccated.—The fresh substance of the corporea lutea of the hog, dried and powdered without the addition of diluent or preservative. For a discussion of the actions and uses of ovary preparations, see New and Nonofficial Remedies, 1924, p. 220. The product is marketed in the form of 2 and 5 grain capsules and 2 and 5 grain tablets. Lehn and Fink, Inc., New York.

PROPOSOTE.—A condensation product of creosote and phenylpropionic acid. It contains the equivalent of 50 per cent of creosote. Proposote is not decomposed by the gastric fluids and passes the stomach practically unabsorbed. It is decomposed in the intestine and its components are chiefly eliminated through the kidneys, but it is claimed that a part of the liberated creosote is eliminated through the respiratory tract. Based on this latter elimination, the administration of proposote is claimed to be of value in bronchitis and coughs due to bronchial infections. Proposote is used for the same purposes for which creosote is administered. It is marketed in the form of capsules containing 5 and 10 minims, respectively. Parke, Davis and Co., Detroit.

STANDARD RADIUM SOLUTION FOR INTRAVENOUS INJECTION.—5 micrograms Ra. Each ampule contains radium chloride. Standard Chemical Co. (New and Nonofficial Remedies, 1924, p. 277) equivalent to 5 micrograms of radium element in physiological solution of sodium chloride, 2 C.c. Radium Chemical Co., Pittsburgh.

STANDARD RADIUM SOLUTION FOR INTRAVENOUS INJECTION.—10 micrograms Ra. Each ampule contains radium chloride. Standard Chemical Co. (New and Nonofficial Remedies, 1924, p. 227) equivalent to 10 micrograms of radium element in physiological solution of sodium chloride, 2 C.c. Radium Chemical Co., Pittsburgh.

STANDARD RADIUM SOLUTION FOR INTRAVENOUS INJECTION.—25 micrograms Ra. Each ampule contains radium chloride. Standard Chemical Co. (New and Nonofficial Remedies 1924, p. 277) equivalent to 25 micrograms of radium element in physiological solution of sodium chloride, 2 C.c. Radium Chemical Co., Pittsburgh.

Iletin (Insulin-Lilly) U-10, 10 C.c.—Each C.c. contains 10 units of iletin, (insulin-Lilly) (New and Nonofficial Remedies, 1924, p. 152). Eli Lilly and Co., Indianapolis, Ind.

Iletin (Insulin-Lilly) U-20, 10 C.c.—Each C.c. contains 20 units of iletin (insulin-Lilly) (New and Nonofficial Remedies, 1924, p. 152). Eli Lilly and Co., Indianapolis, Ind.

Iletin (Insulin-Lilly) U-40, 10 C.c.—Each C.c. contains 40 units of iletin (insulin-Lilly) (New and Nonofficial Remedies, 1924, p. 152). Eli Lilly and Co., Indianapolis, Ind.

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies
Issued Monthly under direction of the Publication Committee

VOLUME XXII

APRIL, 1925

NUMBER 4

E. J. GOODWIN, M. D., Editor
901 Missouri Theatre Building, St. Louis, Mo.

PUBLICATION } W. H. BREUER, M. D., Chairman
COMMITTEE } C. B. FRANCISCO, M. D.
 } M. A. BLISS, M. D.

ORIGINAL ARTICLES

PRACTICAL POINTS IN THE MANAGEMENT OF DIABETES

D. R. BLACK, M.D.

KANSAS CITY, MO.

During the past year some 560 articles have appeared in the literature, dealing with some phase of diabetes. This sudden interest in the subject of course received its impetus as a result of the epoch making discovery of Banting and his co-workers and naturally most of the articles have dealt primarily with insulin therapy. At first, interest was centered in the spectacular results of insulin in diabetic coma and when one recalls the utterly hopeless coma case of yesterday and sees the same type of patient today, restored not only to life but often to usefulness, little surprise is manifest at these enthusiastic reports.

Then follows numerous reports dealing with the type of case in which insulin therapy should be instituted. A little later much consideration is given to the phenomena of hypoglycemia and insulin reactions. These observations in turn ushered in a voluminous literature dealing with the standardization of insulin dosage. In this connection the fact was early recognized that aside from variations in blood chemistry, urinary findings, presence or absence of severe acidosis, gangrene, infections, duration and stage of the disease, age of the patient, functional condition of the kidneys and the mental attitude of the case in hand, the most important one criterion by which insulin dosage could be established was by accurate consideration of the amount and type of food given.

Among the principal contributors to this all important phase of the subject may be mentioned, Woodyatt, Wilder, Shaffer, Banting, Fletcher and Campbell, Lusk, Benedict, Osborne, Ladd, Palmer, Olmstead, Newburg, Marsh, Allen, Joslin, Boothly, Atkinson and others.

When this maze of hypothesis, fact and near fact, are finally correlated with the actual

metabolic needs of the diabetic as we see him from day to day, then and not until then will we be able to give our patients the longest and most comfortable expectancy of life.

I shall confine myself as nearly as possible to the relation of the three common food stuffs, fat, carbohydrate and protein, to one another and to the total food requirements of the diabetic, and to the treatment of diabetes in elderly people.

By way of introducing the complexity of the problem we might recall the nine possible transformations which the three common food stuffs may undergo in the body, namely:

1. Food fats into tissue fats.
2. Food carbohydrates into tissue carbohydrates.
3. Food proteins into tissue proteins.
These are the simple transformations.
The next two are more complex but the fact that they do occur is now well established.
4. Food proteins into tissue carbohydrates.
5. Food carbohydrates into tissue fats.
The next two transformations certainly occur in the lower forms but probably not to any appreciable extent in man.
6. Food fats in the presence of some simple source of nitrogen into tissue proteins.
7. Food carbohydrates in the presence of some simple source of nitrogen into tissue proteins.
8. Food proteins into tissue fats.
9. Food fats into tissue carbohydrates are at present in some dispute, but evidence has accumulated lately which suggests that they may and do occur.

In determining the ideal diet for the diabetic patient, three fundamental requirements must be satisfied. First, strength must be maintained, therefore, the total caloric value of the ration must approach, as nearly as possible, that for the normal individual. Second, protein requirements must be maintained. Protein increases metabolism and if given in excess favors acidosis but if given in an insufficient amount it favors the breaking down and loss of body proteins with the result of undermining the very organism itself. Third, the relation of fat to carbohydrate and protein must be such that ketosis will not result; as a rule it is

relatively easy to control most of the severe complications to which the diabetic is subject while the patient is in the hospital or at least is under direct supervision. The real efficiency test of treatment begins, however, when the patient goes home and attempts to get along, more or less on his own responsibility. To this end the patient's progress, after leaving the hospital, will depend to a large extent on his knowledge of the nature of diabetes and his ability to calculate proper diets. To my mind, therefore, after the alarming symptoms have subsided, the physician will most benefit his patient if he assumes the role of teacher.

Caloric Needs of the Diabetic. That diabetics do better when under weight is no longer a subject of dispute. It has been estimated that the normal individual weighing 70 kg. requires, under the following conditions, the given number of calories in 24 hours.

	Calories per Kg. body wt.	Total calories
At rest.....	25-30	1750-2100
Light work.....	30-40	2450-2800
Moderate work....	40-45	2800-3150
Hard work.....	45-55	3150-4200

In diabetics the diet should contain, as nearly as possible, the minimum number of calories which the normal individual would require under similar conditions. Several investigators have offered formulae for the accurate calculation of total caloric requirements. These calculations usually are based on data submitted by Dubois, Benedict, Rubner, Lusk and others. In general they attempt to meet the basal heat production, plus 10 per cent for the food itself, plus the calories used in ordinary physical exertion. Under given conditions it is true that caloric output varies with the body surface area, which in turn is calculated from weight and height; and finally the total caloric requirement is calculated from body surface area, age and sex.

Benedict is of the opinion that, while diabetic patients as a class have in common the same metabolic error and should be governed by the same metabolic laws, it is equally true that in diabetes extreme variations in the nutritional state are encountered and that herein lies the falling of arbitrary formulae.

Some of the cases in my own series gain weight and are able to carry on their ordinary duties on 25-30 calories, while others lose weight and are incapacitated on 35 calories per kg. body weight. Granting that the various formulae are acceptable for the diabetic patient at rest, and under basal conditions, still they are open to the criticism of offering not accurate criterion for active life. In this connection, Allen, speaking of his own method says, "We follow no arbitrary rule for establishing

the total diet of a patient." It may appear scientific to determine the basal metabolic rate and then guess at the requirement for active work, but it is as well to guess at the whole diet in the first place. Naturally the guess of Allen and the guess of ordinary doctors practicing medicine certainly would lead to varied results, nevertheless his point is well made.

Some approximation of the total caloric requirement may be based on the patient's height and weight: My diets have been based on these factors alone. I have found the following simple method of calculating normal weights particularly useful; the normal weight equals the height in inches above five multiplied by $5\frac{1}{2}$ plus 110, and if possible I make the total caloric value of the diet under, seldom over, 30 calories per kg. body weight based on this normal standard.

It is essential that one follow some simple method of establishing the ketoantiketogenic value of the diet. I have chosen that of Woodyatt as being the most satisfactory, i. e., $F - \bar{C}^2 - P^2$. By following this formula the ration of available fatty acid to available glucose in the diet will equal 1.5:1, and this ration according to Woodyatt will prevent acidosis. The methods and reasoning by which the amount of carbohydrate and protein are calculated and a criticism on the idea of formulae in general, will follow.

Carbohydrate requirement. I try to give the largest amount of carbohydrate which the patient will tolerate without hyperglycemia or glycosuria. If the given patient is unable to tolerate enough carbohydrate for either the complete oxidation of his fat ration, or to satisfy certain cravings which the already nervous, irritable diabetic manifests I add sufficient carbohydrates to satisfy these requirements, and metabolize the addition with insulin. No arbitrary rule is at hand by which the amount of insulin can be calculated from day to day. Different patients under seemingly similar conditions require different dosages, but one usually will not be far wrong in allowing one unit of insulin for each 2.5-3 grams of carbohydrate to be metabolized above the patient's tolerance. It makes little difference whether this amount be calculated from the amount of glucose in the 24 hour sample of urine or the actual addition in carbohydrate ration, when no glycosuria is present.

The question of protein requirement is still under dispute. Statistics in the United States show the average 24 hour intake of protein in all classes to be 100 grams. The statistics of Königsburg, Munich, Paris and Long indicate an average 24 hour consumption of 400 grams carbohydrate plus 100 grams of each fat and protein to be fairly constant in temperate climates. Authorities are not all agreed how-

ever that the chosen diets of man really represent his physiologic needs. Chittenden, for example, shows that man can apparently get along with 6.6 grams protein per kg. body weight. In fact, he believes people in general shorten their natural expectancy of life by eating too much protein, to which McLeod answers, "The question is not can he but should he do so." Is Chittenden right and are the instincts of man wrong? Realizing that body proteins must be spared and that protein definitely enhances the strength and vigor of the patient, we have followed Allen, in that we use a liberal amount, namely, 1.125 grams per kg. body weight, depending on whether the patient is an adult or young and especially active. Fat must make up the bulk of the diabetic diet, and our fat rations are calculated to meet the caloric requirements of the patient, provided this can be done without producing acidosis.

As previously stated Woodyatt concludes, on a basis of experiments by Zeller, Lusk, Osborne and his own observations, that one gram glucose will metabolize 1.5 grams higher fatty acids without ketosis. Banting and Fletcher use a slightly lower figure 1 gram glucose per 1.3 grams higher fatty acid. Ladd and Palmer simply use 1 gram carbohydrate in the diet to each 4 grams fat. Wilder uses 1 gram glucose to 1.7 gm. higher fatty acid. Shaffer used 1 gm. glucose, 2 grams higher fatty acid. The available glucose and higher fatty acids in these diets are calculated on the assumption that the carbohydrate of the diet is metabolized as glucose 100 per cent. Fatty acid 0. Protein of the diet is metabolized as glucose 58 per cent, fatty acid 46 per cent. Fat of the diet is metabolized as glucose 10 per cent, fatty acid 90 per cent.

While all investigators share the view that without sufficient available glucose fat cannot be burned and that fat improperly burned leads to the production of an excess of oxybutyric acid, but not all have accepted as a fact that the available glucose metabolized from diets by all diabetic patients is represented by the equation $G = \text{the carbohydrate plus } 58 \text{ per cent of the protein}$. Last year I attempted to prove, as a result of data collected from portein feeding experiments to severe diabetics, that probably a much smaller amount of the carbohydrate molecule was metabolized as glucose. During the past year we have repeated these feeding experiments on a number of original patients after their food tolerance in general had been increased with insulin, and still other curves have been made on new patients under insulin therapy. The technique of the protein tolerance test as given in the other paper is as follows: The patients present themselves at the laboratory in the morning before breakfast. Samples of blood and urine are taken. The

patient is then given 185 gm. chopped beef, water being allowed freely. Samples of blood and urine are taken at one hour intervals for four hours. Determinations of sugar, urea nitrogen, non-protein nitrogen and CO_2 combining power of plasma and chlorides being done on the blood. Sugar and non-protein nitrogen determinations are made on the urine. Our previous curves after the protein meals. These curves after insulin therapy have all failed to show an elevation of blood sugar. We concluded, originally, that those cases who failed to response to protein meals with elevated blood sugar curves had no difficulty in maintaining normal nitrogen balance and that they were unable to tolerate even a moderate amount of fat. Those cases which responded to protein meals with a definite elevation of blood sugar were prone to burn their own body protein and they were able to metabolize diets relatively high in fat. Our later series indicates that insulin in addition to increasing carbohydrate tolerance, has enabled the patients to maintain nitrogen balance but has not increased the ability to burn fat, even in proportion to the increase in the ability to burn carbohydrate.

Substitutes for fat. Emden in 1906 observed that the normal fatty acids containing an even number of carbon atoms, varying from 4-12, all gave rise to aceto-acetic acids when their salts were perfused through the surviving liver of dogs. The normal fatty acids containing an uneven number of carbon atoms failed to cause any increase in the aceto-acetic acid production.

Now in the catabolism of fats (under normal conditions, that is in the presence of proper carbohydrate oxidation) there is a rapid breaking down of the fatty acid radical to four carbon acids, i. e., butyric acid. The butyric acid is then rapidly catabolized to carbon dioxide and water. This process is, however, markedly delayed in states of deficient carbohydrate oxidation. In the later circumstance the fats are primarily broken down to butyric acid as in the normal condition, but in the absence of the heat of carbohydrate consumption the further decomposition of butyric acid proceeds very slowly. The butyric acid under these conditions, is decomposed first to oxybutyric acid and then to aceto-acetic acid. The further decomposition to acetone takes place largely in the urine itself. Of the two components of fat, only the fatty acid radicals yield the ketone substances. The glycerine portion of the fat molecule is antiketogenic in nature. Kahn has prepared an odd carbon fatty acid fat that is edible, is absorbed to the extent of about 90 per cent and is catabolized in the body, and which he claims does not yield ketogenic substances derived from butyric acid.

He claims that by substituting either part or all the fat in the diet of the patients with severe acidosis that the degree of acidosis will be lessened. Our experience has been limited to two cases. The results have not been striking, although diabetic acid disappeared from the urine for short intervals.

Two types of patients have interested me greatly, namely the type that occur so frequently in the elderly individuals with arterial disease and the type associated with deranged kidney function. Of course the fact that the patient is elderly and that he has advanced blood vessel change, does not fix his type of diabetes, but the condition occurs with sufficient frequency as to deserve special mention. These patients, usually men in their fifties or sixties, when recognized as such, have usually had a more or less constant glycosuria for from three to ten years. Often they are overweight and generally their chief symptom is glycosuria. As a rule they seek advice because they have been told that their urine contains sugar. Some of them may present or may have previously had symptoms referable to the hyperglycemia and glycosuria such as polyuria, nervousness, thirst, dimness of vision, weakness, somnolence after meals. In most cases, inquiry will reveal that these symptoms initiated the glycosuria and it promptly subsided after reasonable dietary procedure and have reappeared only at times when the patient had been extremely careless in diet. On the other hand their symptoms have been referable to the arterial disease or the degenerative changes in the nervous system, that is neuritis, intermittent claudication, muscle cramps, gangrene perforating ulcers and retinitis. They rarely show severe acidosis or emaciation. Occasionally during the course of a severe infection, these cases might show evidence of inability on the part of the body to utilize sugar.

The first type is represented by the usual mild diabetes of elderly people in whom desugaring is easily accomplished and maintained without recourse to weakening diets. The second type fortunately less frequently seen than the first, includes those patients with definite functional kidney change and advanced arterial disease often associated with tendencies to gangrene and perforating ulcers. In order to keep this class sugar free, it is necessary to reduce the diet to such a degree that weakness and general disability invariably ensue. The proportion of urinary sugar in these patients does not always follow the proportion of carbohydrate in the diet that is if the patient is on a diet of 100 gm. carbohydrate and we double this amount, then the urinary sugar is not often doubled in fact, many of them are able to metabolize almost normal amounts of carbohydrate and the fact that they have sugar

in their urine, rests largely with the kidney. If we can demonstrate the fact, that their carbohydrate metabolism is not greatly at fault then our concern lies chiefly in whether or not they should be kept sugar-free. Patients with disability come to the physician for the relief of that disability and if we, in our zeal to rid the urine of sugar, depress the diet sufficiently to disable the patient, within a few who have enjoyed comparatively good health and strength for years, then from the patient's standpoint our treatment is worse than his disease. These points can best be illustrated by following the course of two elderly patients.

Case 1. Mrs. S. Age 63, came in complaining of neuritis, affecting principally the legs and feet, severe itching of vulva, blurring of vision and headache. Symptoms began two years ago with polyuria, thirst, loss of weight. Later vision began to fail and within six months there was a marked puritis with burning. During the first year she lost fifty pounds. On admission she was somewhat pale, definitely emaciated and in general a sick patient. Her blood count was hemoglobin 75 per cent. R.B.C. 4,484,000. W.B.C. 9,600. Polys, 51 per cent. Large lymphs, 12, small lymphs 26 Eos, 5 Trans. 6. Blood sugar 250 mg. per 100 c.c. Urea nitrogen 16.3 mg. Creat. 1.7—CO₂ 43 vol. per cent. Chloride, 510 mg. Wassermann test negative. *Urinalysis:* Light amber, clear, Spg. Gr. 1.025, acid reaction, trace albumen and trace sugar, 2.6 per cent, 50-60 pus cells. Few hyaline and granular casts. She had been on a greatly reduced diet for two months. We placed her on starvation diet until her blood sugar was normal and she was sugar free. We then established her carbohydrate and protein tolerance. She could tolerate C-30, P-65, F-95 without hypoglycemia or glycosuria. This made 1235 calories with fat ratio within safe limits. Her calculated weight was 135 pounds or 61 kilograms. If we allowed her thirty-five calories per kilogram body weight, her daily ration would have been 2100 calories. It so happened that she should maintain weight and strength on her tolerance diet so we made her daily food intake up to 1850 calories, allowing C-65, P-75, F-145. We allowed insulin enough to render her blood sugar normal and urine free from sugar. She steadily gained strength. Her neuritis has disappeared, her puritis rapidly subsided and at present one year from the date of her first visit, she is taking C-75, P-75 and F-150 with ten units insulin night and morning and feels good. Her blood pressure has been reduced from 220-110 on admission to 165-90. Her vision is definitely improved and she is in perfect carbohydrate and nitrogen balance. This patient represents a case of true diabetes mellitus with definite inability to metabolize food.

Case 2. Dr. C. Age 64, came in complaining of vertical headache, intermittent, epigastric cramps with occasional attacks of severe indigestion. Has had glycosuria for twelve years. At first there was loss of weight, polyuria, thirst and other classical signs of diabetes. These signs subsided in a few months on rather meager dietary treatment and he has been in comparative comfort altho running constant glycosuria until the past year, when he began having dizziness and slight shortness of breath with these headaches. There have been cramps in the legs and recently one toe became slightly discolored. The patient attributed his symptoms to diabetes and placed himself on a very low diet. He lost weight and strength and became irritable and nervous and even with severe dieting was unable to keep himself completely sugar-free. He came to our clinic for insulin treatment. His weight on admission was

210 pounds. Height six feet, six inches. Appearance good. His blood count was Hg. 90 per cent. Red blood cells 4,484,000. White blood cells 8,400. Polys. 56 per cent. Small lymphs 20. Large lymphs 12. Trans. 2. Blood sugar 196. Urea nitrogen 1401. Creatinin 1.5. CO₂ 58 vol. per cent. We decided that his diet should contain about 35 calories per kg. body weight and consequently placed on C-110, P-100, F-200, or 2750 calories. His blood sugar remained constant. In fact after two weeks it was reduced to 160 mg. His urine contained small amounts of sugar. He was dismissed on this regime for one month. He then returned and we desugared him at the expense of definite loss of strength and comfort. We also gave him a relatively higher caloric diet than his metabolism required and found that he was able to metabolize this excess fairly well. We decided on the original calculated diet of C-110, P-100, F-200, which he has been on for just thirteen months. He feels good at the present time. His dizzy attacks and attacks of epigastric cramps have subsided and his eyes have improved. I feel that it would have been a mistake to have given this patient insulin or to attempt to render him absolutely sugar-free.

713 Lathrop Building.

DIVERTICULITIS OF THE LARGE INTESTINE*

From the X-ray Department, Washington University Medical School.

JOSEPH W. LARIMORE, M.D.,
ST. LOUIS

Diverticulitis of the sigmoid was reported in 1899 by Graser¹ but not until eight years later was the condition demonstrated during the life of a patient. Between 1907 and 1915 there appeared several articles co-relating clinical to autopsy and to operative findings. In 1915, Carman² reported the X-ray study of three cases of diverticulitis with demonstration of the presence of diverticulosis. In this report he credits a case reported by Abbe in 1914 as being the only one in the literature of an X-ray demonstration of diverticulosis. He also comments upon the absence of any mention of the condition in a monograph in 1914 on X-ray diagnosis of the colon by Schwartz of Vienna. In 1917, W. J. Mayo³ reported forty-two cases of resection of portions of the large intestine for diverticulitis. Telling,⁴ as quoted by Gant,⁵ showed an incidence for diverticula of eighty-three in 13,068 autopsies compiled from several sources. This is 63/100 per cent and includes almost as many congenital as false diverticula. Spriggs⁶ records an incidence of six cases in one thousand examinations, but thinks this is too low.

Diverticulosis of the colon may exist asymptotically, the discovery of the condition being accidental at the time of gastro-intestinal X-ray studies. At the Washington

University X-ray Laboratory diverticulosis of the large intestine has been demonstrated fifty-five times in 4,408 examinations, an incidence of 1.24 per cent. In the last portion of the series it occurred twenty-two times in 1,333 examinations, or in 1.65 per cent. This in-

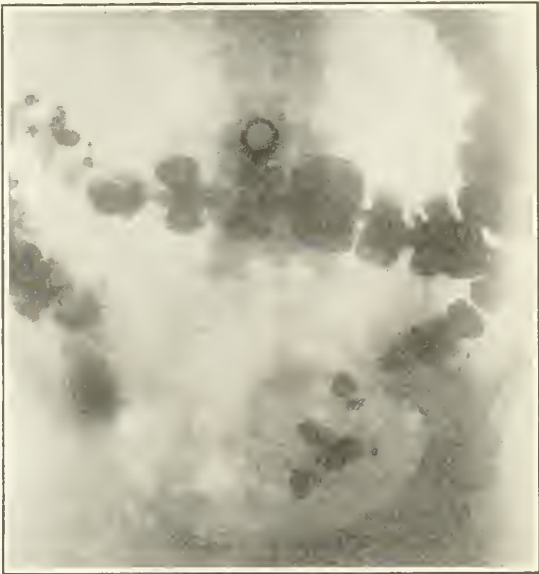


Fig. 1. Case 1. Barium distribution at the 24th hour observation of the fed test showing diverticula in the transverse, descending, and iliac colons.

crease in frequency is probably due to our greatly increased use of the barium enema. These figures include all cases in which one or more diverticula were demonstrated by the X-ray examination. Twenty-one cases showed only isolated diverticula, usually fewer than four. Thirty-four cases showed multiple diverticula. Six cases from my private office are included in the tables.

The sigmoid was the most frequently involved portion. Multiple diverticula were limited to the descending colon in five cases; in one case all portions except the rectum were involved; in two cases all portions except the cecum and the rectum were involved. The proximal bowel only was involved in but two cases, and the cecum only in but one of these. There was usually X-ray evidence of spasticity in the sigmoid colon; and in one-half of the cases, delayed motility of the colon was demonstrated.

Table I.
SEGMENTS OF THE COLON INVOLVED*

	Total	Cecum	Ascend- ing colon	Trans- verse colon	Descend- ing colon	Sigmoid colon
Isolated diverticula	22		1	7	1	13
Multiple diverticula	29	1	1	3	5	29
Totals	61	1	2	10	6	42

*Read before the Washington University Medical Society, May 12, 1924.

*The segment chiefly involved tabulated for multiple diverticula.

Table II.
AGE INCIDENCE BY DECADES

	21-30	31-40	41-50	51-60	61-70	71-80
Isolated diverticula	2	2	3	4	10	1
Multiple diverticula	5	3	8	11	11	6
Totals	2	5	11	15	21	7

Table III.
INCIDENCE FOR TYPES OF BODY HABITUS

	Number	Percentages
Total	61	
Hypersthenic	12	19.7
Sthenic	37	60.6
Hyposthenic	9	14.7
Asthenic	3	5.0

Table IV.
INCIDENCE FOR SEX

Males	42	Ratio	2.2 to 1
Females	19		

The condition was not met in any colored patient, although a large percentage of our subjects have been negroes. (Since this summary was made the condition has been seen in one negro man of hypersthenic habits.) Subjects showing diverticulosis were chiefly of the sthenic and hypersthenic type of bodily habitus.

The acquired diverticula which are the site of diverticulitis have been descriptively called "mucosal herniae," the mucosa pouching through the musculature at weak points. This may occur on any point of the circumference, but more frequently between the lateral and mesocolic bands, and occurs usually at points of blood vessel penetration. The size and shape of the diverticula vary. They may or



Fig. 2. Case 1. Barium enema demonstrating diverticula in the transverse, descending, iliac, and pelvic colons.



Fig. 3. Case 2. Barium distribution at the 6th hour observation of the fed test showing diverticula in the ascending and proximal transverse colons.

may not contain fecaliths. The cause of their formation is frequently stated as an increase of intercolonic pressure or tension. This must be considered as a relative factor, as evidence of an absolute increase of intercolonic pressure is too frequently met with in the absence of any diverticula. Spasticity, and local spasm of the bowel are dominating factors in occlusion of the diverticula and this explains the occurrence of diverticulitis most frequently at the recto-sigmoid, even when diverticulosis involves the colon more extensively. We have observed diverticulosis in two brothers and in a near blood relative. This suggests an hereditary structural weakness as a fundamental factor.

Diverticulitis may be self limiting and recurrent. As complicating and progressive factors there occurs diverticulitis with the development of fistulae external and to contiguous organs, colonic obstruction, and superimposed malignancy and localized abscesses. General peritonitis may result.

Among the symptoms of diverticulitis pain is the most prominent. This is of two varieties, localized tenderness in the left lower quadrant coinciding with the site of local inflammation, and abdominal cramping more or less localized, this latter often being the only pain subjectively noted by the patient. Constipation is a notable accompaniment of diverticulosis and of diverticulitis. While constipation with an actual colonic motor delay is usually

present, there may occur during the attacks the psuedo-diarrhea of spastic constipation with frequent small actions associated with abdominal colic, the passage varying from a fecal stool to those with only mucus, which may show blood. During attacks of diverticulitis a mass may be and is often palpable in the left lower quadrant. It is often discovered by the patient. This is acutely tender as may be expected from such an inflammatory process. In the absence of the palpable mass the characteristic acute tenderness of active inflammation may be the only sign elicited. Blood with the stool is not a frequent finding but when present and persistent suggests malignancy, and this must receive the most careful diagnostic attention. Proctoscopic examination, as a rule, gives no positive help unless obstruction or malignant degeneration has occurred, and that within reach of the proctoscope.

The clinical diagnosis of diverticulitis may be fairly certain in characteristic cases. It must be differentiated from pelvic disease, left urological diseases, appendicitis, and primary malignancy. The X-ray will in the majority of cases give conclusive confirmatory evidence by demonstrating diverticulosis.

The X-ray demonstrates diverticulosis by the filling and visualization of the accessory pockets by ingested barium sulphate or bismuth salts. Under the conditions of the fed test it may be difficult to conclusively identify



Fig. 5. Case 2. Barium residuum in the diverticula after the bowel lumen had been emptied in preparation for a barium enema.

shadows of diverticula from those of barium fragments within the bowel lumen. The filling of diverticula may be characteristic inasmuch as fecal concretions contained in the pocket so influence the barium filling that the form of the barium shadow about the non-opaque fecalith is characteristic. A barium residuum filling the pockets after the bowel lumen has been emptied, clearly demonstrates the condition. Opaque material may persist in the pockets over weeks, or longer. Demonstration of pockets accessory to the lumen of the bowel by the barium enema is conclusive. It is suggested that the pre-diverticular state may be demonstrated. Certain pictures are highly suggestive of this because of abnormal minute irregularities along the contour of the colon. These are nonretentive but coincide with an abnormal spasticity and form of the colon at these sites. This most usually occurs in the recto-sigmoid colon.

Case No. 1. Female; age 63 years; Temperature, 99.2°; Weight, 132 lbs. or 8 lbs. below normal. Blood pressure, 180-96. The patient complains of abdominal pain occurring in attacks during the past year, each attack continuing for several days. The last and present attack has persisted for six weeks. The pain is transabdominal and greater in the left lower quadrant. The bowels are usually constipated but in attacks there are frequent stools, chiefly of mucus, and occasionally with blood. From this history, which could not be elicited in greater detail because of the patient's irrelevancy, a tentative diagnosis of cancer of the lower colon and amebic dysentery were considered.

Proctoscopic examination, however, with adequate view into the lower recto-sigmoid was not notable.



Fig. 4. Case 2. Barium distribution at the 24th hour observation of the fed test showing diverticula in the ascending, transverse, descending, iliac, and pelvic colons.

There was slight tenderness localized over the iliac colon. The leukocytes were 16,800. The stool examination showed no occult blood or parasites.

The clinical diagnosis was made tentatively as acute diverticulitis of the colon. The subsequent X-ray examination determined the condition. There were multiple diverticula in the sigmoid and iliac colons, and infrequent diverticula in the transverse colon.

The acute condition subsided and treatment has been directed to correction of the constipation and spastic colitis. Pain has recurred for one day and it was relieved co-incidentally with magnesium sulphate enema.

Case No. 2. Female; age, 48 years; weight, 138 pounds. The patient complains of pain in lower abdomen, cramping in character, and with a localized tender point in the lower left abdomen, coinciding with a palpable "lump." The patient has had similar attacks frequently during the past seven years, and chiefly during the winter. During the past winter there has been greater frequency to the attacks, which seldom continued over one week, during which time the patient remained in bed and kept ice packs over the "lump." The last attack has persisted for three weeks with varying severity of the pain and with slight fever. This patient had been advised in the past to have an operation for ovarian disease.

Examination showed a moderate rigidity of the left lower abdomen and a small palpable mass in the outer left lower quadrant, which during the succeeding ten days varied in size, and finally disappeared. The leukocyte count was 16,800. The temperature was 99.8 degrees.

Enemata of magnesium sulphate and opium adequate to control the pain and cramping seemed to have helped in terminating this attack and have subsequently served to abort threatened attacks.

The X-ray examination showed diverticulosis of



Fig. 7. Case 2. Residuum of bismuth in diverticula one week after administration had been discontinued.

the ascending, transverse, descending, and iliac colons, showing several hundred small, filled diverticula 1 cm. or less in diameter, most frequent in the immediate region of, and just proximal to the recto-sigmoid apparatus, and least frequent in the transverse colon. There was no palpable mass or tenderness at the time of the examination.



Fig. 6. Case 2. Barium enema demonstrating diverticula throughout the colon.

Treatment of diverticulitis necessarily must be individualized as each case shows variability in the degree and in the type of complication. Simple diverticulitis with recurrent attacks may be considered an indication for direct surgery; however, when the diverticulosis involves the entire colon, making a total colectomy necessary, the operation should be made elective. It may be suggested that local partial colectomy be done even when the diverticulosis involves the entire colon since diverticulitis occurs with the greatest frequency in the recto-sigmoid colon. For acute obstruction of the colon, acute peri-diverticular abscess with or without perforation, chronic obstructing fibrosis about the diverticula bearing area, and for malignant involvement, operation is necessary. Medical care of diverticulitis and diverticulosis of the colon includes primarily the care of the relative or actual constipation. This involves the use of antispasmodics, laxative diet with the use of bran, agar agar, and mineral oil. Laxatives are contraindicated. Bismuth salts are used intermittently as in some manner influencing favorably the course of diverticulosis and preventing attacks

of diverticulitis. Enemata should be used where necessary for the relief of constipation, and in the cases here reported magnesium sulphate enemata have seemed to have an aborting influence where pain indicated a recurrence of the inflammatory process.

420-424 University Club Building.

BIBLIOGRAPHY

1. Graser: Ueber multiple Darm divertikel in der Flexura Sigmoides, *Verhandl. d. Deutsch. Path. Gesellsch.* 1899, Berlin 1900, 254-256.
2. Carman, R. D.: The Roentgenologic Finding in Three Cases of Diverticulitis of the Large Bowel, *Ann. Surgery*, 41:343, 1915.
3. Mayo, W. J.: Diverticulitis of the Large Intestine, *J.A.M.A.* 49:781 (Sept. 8) 1917.
4. Telling, W. H. M.: Acquired Diverticula of the Sigmoid Flexure. Considered especially in Relation to Secondary Pathologic Processes and their Clinical Symptoms, *Lancet*, 1:843, 1908.
5. Gant, S. G.: Diverticula, Diverticulitis and Peridiverticulitis of the Small Intestine, Cecum, Colon, Sigmoid Flexure, and Rectum, *J.A.M.A.* 77:1415, (Oct. 29) 1921.
6. Spriggs, E. I.: Duff House Papers, Vol. 1.

THE METHOD OF REDUCING THE MATERNITY DEATH RATE IN MISSOURI*

GEORGE CLARK MOSHER, M.D.

KANSAS CITY, MO

The topic selected to present is one upon which my energies have been centered for several years. It is remarkable that the practice of medicine, which has made vast strides in every other section, has shown in that of obstetrics alone a failure to keep pace with the advance in the healing art.

It is not with any degree of pride that your attention is called to the problem which is to be met and solved because it can be solved and easily determined through one medium, that of education.

The crying shame of America in this day of investigation, disclosure and censure is not the revelation of the story of Teapot Dome nor the grand jury methods of the United States Senate nor any other phase of political or social shortcomings.

It is a fact that in maternal mortality the United States, according to the figures of the Bureau of Child Welfare at Washington, stands not first in protecting the lives and health of our mothers in childbirth, but is exceeded only by Spain and Belgium of the sixteen so-called civilized countries of the world.

The latest report of the United States Census Bureau gives the maternal mortality as 16.30 per cent of the 100,000 population. This is no less than the rate of 1900. Of the deaths reported about one-half are due to sepsis and 40 per cent are from toxemia and hemorrhage.

so that we may say that 90 per cent of our maternal mortality is preventable. As compared with this rate for the country at large, the conditions in Missouri are somewhat reassuring as we have made a decided reduction in the ten years, 1913 to 1923. The state board of health has furnished us with the data quoted, and it is shown that in 1913 there were reported from St. Louis, 48 deaths from sepsis; Kansas City, 18 deaths; for the state 290 deaths. In 1918 St. Louis reported 25 deaths, Kansas City 9 deaths and the state 180 deaths. In 1923 the state reports 122 deaths; Kansas City 15 deaths and St. Louis had not been tabulated when the reports were mailed me last week from Jefferson City.

From eclampsia in 1913 the state reported 106 deaths, in 1918 only 17 deaths, while in 1923 there were reported 88 deaths; evidently the figures for 1918 are incorrect, as there was a great increase of toxemia during the war. Hemorrhages claimed 57 victims in 1913. In 1918 there were 54 deaths and in 1923 the number is reduced to 31 deaths; but in 1923 there looms up 18 deaths following Cesarean section. The total puerperal deaths reported in 1913 are 584; in 1918, 357; in 1923, 426. While the records of the entire United States show a steady barometer in maternal mortality, Missouri has been making an improvement in sepsis, eclampsia and hemorrhage. Cesarean section alone attracts attention, not having heretofore been included as a general cause of death in our state reports.

A hundred years ago Dr. Charles D. Meigs, then professor of obstetrics at Jefferson Medical College, warned his colleagues to beware of meddlesome midwifery. In 1845 Oliver Wendell Holmes wrote his famous essay on puerperal sepsis, or childbed fever, which he denominated, "The Private Pestilence." In passing, I had the pleasure fifty years later of receiving a letter from the "Autocrat of the Breakfast Table," in reply to one in which I thanked him for the inspiration of his vision. Dr. Holmes wrote, "I have long been willing to forego all literary pretension rather than give up the essay on childbed fever which I have reason to believe has saved many valuable lives."

Holmes and Semelweiss, long before the day of bacteriology, were pioneers in the application of keen observation of the facts of their experience and while the only immediate reward that either received was the abuse and contumely of their competitors, we today venerate their memory as martyrs.

One after another, writer and teacher, has given us warning and our hospitals and prenatal clinic centers demonstrate that sepsis and

*Read before the 67th Annual Meeting, Missouri State Medical Association, Springfield, May 6, 7, 8, 1924.

eclampsia can be vastly reduced, yet like Banquo's ghost the melancholy figures come up to plague us and to show us that something is wrong in obstetrics.

What is the secret of the misfortune of our prospective mothers? I am privileged to quote from the advance proof of the forthcoming new edition of De Lee's *Obstetrics*, a most interesting and valuable reflection based on observation of an enormous clinical experience and drawn from the writing of our greatest authorities. "Obstetrics is not today a normal function. In spite of the immense value of the conclusions to be drawn from the figures of the birth registration area, only four-fifths of the United States is included in its activities and it is to be admitted that the returns, even for the area, are not adequate. It is known that in the United States 16,000 women die annually in childbirth." As to late or postponed mortality from injury or from disease acquired during pregnancy and labor and the puerperium, De Lee says no conception can be formed. Nor can anyone tell how many women are buried under some other diagnosis. It is so common a practice where death occurs in an obstetric patient, to designate on the certificate the intercurrent cause, hemorrhage, convulsions, peritonitis or pneumonia, and ignore the fact of the coincidence of the childbirth.

Authors have held that the reproductive function is normal and physiological and should have no morbidity nor mortality of either mother or child, but is it so?

Mauriceau called pregnancy a disease saying that women only escape being sick once a month by having a sickness which lasted nine months. Sir James Y. Simpson said parturition is always physiological in its object, but not in some of the phenomena and peculiarities which attend upon civilized life. Engelmann said a simple normal labor is no longer possible. Henry Schwarz is quoted by De Lee as saying that tradition and ignorance are combined in spreading the fable that childbearing is a physiological process. John F. Moran in 1915 asked for a nation-wide propaganda to teach the laity that the long-cherished fallacy that pregnancy and labor are physiological conditions, should be abandoned. J. Whitridge Williams in 1923 said that 60 per cent of all pregnant women show some effect of toxemia which he classifies as pathological; and Sellheim in 1923 avers that the demands of modern life upon women are such that they have reached their limit of power to meet the strain of pregnancy. He says that eclampsia and other toxemias are a failure of metabolism to adapt the organism to the new situation and

he reaches the saddening conclusion that by culture, so far at any rate as it indicates a variation from nature, the whole process of reproduction has become a process which, for the woman, approaches the pathological.

Franklin Newell, of Harvard, recently stated that investigation of a hundred cases of death following Cesarean section within a radius of 40 miles from Boston showed a mortality of 100 per cent and the majority of the patients had been buried with some certificate of death which ignored the fact of Cesarean section. Of course, this is an extreme instance and fortunately such a statement could not be made regarding inadequacy of statistics generally; still De Lee feels justified in estimating that in the United States 25,000 women annually lose their lives from direct or indirect effect of pregnancy and labor.

Hundreds of women flock to the hospitals for the repair of injuries and the relief of diseases contracted during labor. Can it be claimed with such an array of authorities that childbearing is a physiological function? We know to the contrary and still, as Patrick Henry said in the Virginia legislature, when the ills of the Colonists were being enumerated, "we sit supinely by until we are overwhelmed by our difficulties."

It will be impossible in the few minutes allotted to do more than indicate the principles of alleviation, but that these can be remedied there is no question. We have but to study the reports of those countries that have seriously undertaken the task of protecting the mothers and babies of their nations.

Since in our own land the greatest disparity is found among the cities which have given attention to maternal welfare and those where this type of service is ignored, we need not go abroad for confirmation of our belief in the ultimate removal of the stigma. We know that our maternal death rate has not been reduced in the last 20 years in general, but in some instances it is cut in half, in the same community by the prenatal clinic compared with statistics of the city in general.

The means to be adopted for the relief of the enormous waste of efficient motherhood and the preventable mortality in childbirth must take into consideration the preliminary statement regarding obstetrics. It is not a physiological process. The practice of obstetrics has been from earliest times looked down upon not only by women but the general public and even the medical profession itself. The survival of the name midwifery is in itself significant as an opprobrium.

A society woman in Kansas City, some years ago remarked that she could not admit into

her social circle the doctor who brought into the world her children. This is an evolution of the custom which Engelmann says prevailed among savage tribes in Africa where a young black, who sat in front of the hut in which the woman was in labor and rattled the seeds in a dry gourd to attract the curiosity of the expected child and urge it to leave the mother's womb, was as soon as the baby was born driven into the forest and not allowed to return to the village until the navel was healed.

Obstetrics does not today occupy the position it should as one of the three great branches of medicine in the colleges. In many institutions the head of the department is still, "the professor of gynecology and obstetrics." Hence the best men on entering practice have not been attracted to select obstetrics as a specialty but surgery or one of its less arduous branches or the divisions of internal medicine have been preferred.

Owing to its evolution from primitive ages, the remuneration has been woefully inadequate for the service that the conscientious medical man must bestow during the months of pregnancy and the sleepless hours of labor with the responsibility of two lives to be considered.

This has, to a large degree, left the practice in the hands of young men, beginners without experience or men who have lacked initiative to forge ahead in some other line; in other words, the incompetent—those who have tolerated this work simply as a means of holding family practice in other lines.

Obstetrics has not been a specialty in the limited sense but as some one has styled it, the specialty of the general practitioner. This is admitted by all authorities that have given the subject careful study. Perhaps eighty per cent of attendance at childbirth is done by the family physician and it will continue to be done in the home, because the cost of hospitalization is prohibitive to the family of average income. The cost of a trained nurse in the family with an income of one hundred and twenty-five dollars a month is also out of the question; since the nurse, having seven dollars a day and her board, will cost nearly double the entire income for the period in which she is needed.

Now when we have in mind the fact that the woman in pregnancy and in labor is sick and that force of circumstances places her care in the hands of the busy general practitioner, who can seldom give her any special attention, we have a two-fold reason for our morbidity and mortality.

The old wife's axiom that childbearing is normal and healthy, is often used in assuring

the expectant mother that she needs no expert services, that she is satisfied with the lack of care that so often succeeds her engaging an attendant for her confinement.

Now what is proposed to remedy this situation? Not the demand that a specialist should be employed. As Grover Cleveland said years ago, discussing another subject: "It is a condition we are facing, not a theory." Since we know the facts it is proposed:

First. To begin a campaign of education of the profession, a post-graduate drill in the diagnosis and management of pregnancy and labor, by correspondence and through the clinical centers of the great hospitals.

Second. To attempt to have a new curriculum of the branch of obstetrics which shall be more or less standardized after the system of the half dozen big university medical schools, putting this branch on a par with surgery and internal medicine, where it formerly had its place in the privately owned medical colleges.

Third. To reach the secretaries of the state medical societies and through them the secretaries of the county medical societies to urge upon their members to stress the subject of obstetrics at their meetings, bringing about more papers, more reports of cases, and more discussions of topics connected with the subject.

Fourth. To attempt, through the state boards of health, the organization of committees of regional consultants in obstetrics who shall formulate a minimum standard of obstetric care, after the plan of the Bureau of Child Welfare at Washington and the New York State Board of Health. A pamphlet of minimum requirements of standard obstetrics to be sent to newly married persons suggesting that in case of an occasion arising, a medical man should be consulted in the vicinity and his advice followed as to the health of the woman throughout pregnancy.

Since this is to be done only by the state board and in conjunction with a committee recognized and nominated by the state board representing the various sections of each state, there can be no criticism of interfering with the practice of any individual physician, and many women, it is hoped, who might otherwise be led to consult devotees of some of the cults or go with no supervision, will be led by this information to place themselves under the care of a regular member of the profession.

A joint committee representing the American Association of Obstetricians, of which the speaker is chairman, and one of the American Gynecological Society, of which Dr. Fred L. Adair, of Minneapolis, is chairman and one of the American Child Health Association, has been formed and is undertaking the heroic task

of formulating the program looking to the consolidation of these activities under one general impersonal management. The progress is necessarily slow as it is, as was stated, more a process of education than an attempt at legislation or coercion and the work is handicapped as are most reforms by insufficient funds to carry out its plans.

The Missouri State Board of Health has most enthusiastically cooperated with the movement through the efficient and energetic services of Dr. Irl Brown Krause, director of the bureau at Jefferson City, and it is expected that by another year Missouri will be able to show a much reduced mortality both of mothers and infants. During the past year clinics have been held in 86 counties of the state, always by invitation of the county medical and dental societies and the county superintendents of schools. Three hundred thousand school children have been examined by our physicians in conjunction with the state board.

The committee of regional consultants in obstetrics, named by the state board of health from the various cities of the state have agreed to lay out programs for prenatal clinic service; to advise with the state bureau and to give their services as consultants in cases where requested without charge if the patient is unable to pay. This system is in operation in the State of New York, and Dr. Polak says it is doing a valuable service with very little burden on the individual member.

Ohio, through Dr. Goodman, of Columbus, Dr. A. J. Skeel, of Cleveland, and other men of like calibre, has organized a service which is in conjunction with the state director, Dr. Plummer, and results have been recorded as worth while although the work is still in its first year.

In New York City a maternity center, which was organized 10 years ago and of which Dr. Ralph Waldo Lobenstine is chief of staff, has achieved a remarkable success in comparison of its mortality with that of the city at large.

An endeavor to secure a general view of competent authorities in various states has resulted in the production of an interesting volume of elaborate proportions that in the main are in harmony. From these may be condensed the following:

It is generally agreed by Dr. De Lee and Dr. Rudolph Holmes, of Chicago, Dr. Edward Speidel, of the University of Louisville, Dr. Rucker, of the University of Virginia, Dr. James R. Garber, of the Southern Medical Association and Dr. Carl H. Davis, Secretary of the Section on Obstetrics of the A.M.A., that the causes of maternal mortality and morbidity are:

On the part of the physician:

1. Inefficient teaching of medical students in the colleges.
2. Inadequate preparation of students of medicine, often their own fault.
3. Failure of physicians in charge of maternity cases to apply their knowledge of obstetric principles.
4. Unnecessary examinations, frequently with ungloved hand.
5. Mistakes in diagnosis or failure of diagnosis.
6. Carelessness in technique.
7. Reckless use of pituitrin.
8. Calling surgical instead of obstetrical counsel.
9. Unnecessary frequency of Cesarean section.

On the part of the patient:

1. Ignorance of the simplest truths of life—abortion, criminal or preventable.
2. Avoidance of early consultation with medical men.
3. Listening to folk lore—old mammy superstitions regarding childbirth, advice of cultists and faddists.
4. Indiscretion regarding exercise, diet, indulgence in questionable pleasure, fast living, loss of sleep, etc.
5. Disease which might be cured.
6. Malformation and malnutrition, knowledge of which should be had by the doctor.

On the social side of the problem:

1. Failure of the rich philanthropist to endow maternity hospitals and provide for overhead expense of maintenance.
2. Propaganda for birth control.
3. High cost of living and late marriages.

The line which differentiates artistic skill from meddlesome midwifery is largely a matter of three elements: Native ability, individual training and adequate experience. None of these will convert the party of the second part into the other.

Dr. De Lee does his prophylactic forceps operation, the low cervical incision in a Cesarean section and is successful. The average man cannot hope for equal results.

Dr. Reuben Peterson does a vaginal Cesarean with such facility it seems easy, but it is not. Dr. Potter does 1200 versions annually and while we learn something from his experience as to technique and as to the resuscitation of the newborn from his demonstration, the possible fetal mortality in the hands of the average man must deter us from making version the procedure of choice. My home colleagues think a Scanzoni retation of the posterior head a dangerous maneuver yet I have done it for years with an average degree of success. So it is not to be determined

that a lower mortality is to be realized by any of these maneuvers. We know that 90 per cent of posterior positions of the occiput will rotate, so why not adopt a policy of watchful waiting unless pelvic or fetal dystocia or the condition of the mother or fetus becomes urgent demanding interference.

In the February, 1924, number, of the *American Journal of Obstetrics*, is an article by Dr. Hugo Ehrenfest, on "Head Injuries of the Newborn." I wish every person doing any obstetric practice could read this article. It deals with the disaster of undue long labor and consequent brain hemorrhage. So as between Scylla and Charybdis, "to do or not to do," may we not appeal in the interest of the two most vitally concerned, mother and child? The right of the child to be well born is a most striking phase. The fact of it is well worth consideration. Obstetrics has long been made an apology by the man who simply takes it to hold the family practice and so he does the work cheaply. It is, so to speak, "velvet." He, therefore, gives it as little attention as possible and trusts to luck that no untoward result shall follow. The same is the fashion of many internists, who give us to understand that they only accept the confinement of their intimate friends or those who have had a heart lesion or a nephritis, and who form a combination with a young surgeon who knows no obstetrics but a Cesarean section, rather than to call an obstetrical specialist. These two medical men do a very large share of obstetrics in most parts of the world. They are, of course, not interested in raising the standard of obstetrics because they are going to drop it just as soon as they can afford to do so. Correspondents in Boston, Philadelphia, Dallas, Birmingham, and Worcester mention this as one of the serious difficulties which affect our morbidity and mortality.

The indiscriminate resort to Cesarean section is one of the outstanding offenses against humanity and it is to be regretted that this fashion is spreading so much that every county seat clinic is doing Cesarean sections for the most trivial cause. In several of the state board of health reports Cesarean section has the third highest mortality rate, following sepsis and eclampsia, both of which we must remember are also 90 per cent preventable.

In November, 1923, at the Cook County Hospital, Chicago, I was shown by Dr. Hillis, home colleagues think a Scanzoni rotation of the ruptured uteri of four patients who had been delivered by Cesarean section and in the second delivery the attempt had been made to use the *via naturalis*. Last year I was fortu-

nate in delivering three patients by the natural passage who had previously been the subject of a Cesarean section, and no tragedy followed the event. It is only necessary to quote Dr. Hillis to impress the danger of this problem of obstetrics.

If I may be pardoned for bringing up a controversial point which it is realized has the endorsement of some good men, I want to condemn in the strongest terms the use of pituitrin as a general accelerator of labor. It is, in my opinion, one of the most dangerous of obstetrical expedients. Not but that it does its work well. It does it all too well, but like an automobile with no driver at the wheel it runs amuck. We have had three women die in our hospital for negro women in the last three years, the diagnosis being ruptured uterus, afterward confirmed by post-mortem. Numerous cases of sudden death of women in labor, otherwise unexplainable, have been reported where pituitrin had been used. Dr. S. G. Bandler at a meeting of the New York Academy of Medicine which I had the privilege of attending several years ago, asserted that there is no untoward effect of pituitrin. A case of my own is offered in refutation of the plain fallacy. Immediately following my return from New York a delayed labor in a para III, apparently with an inertia, 3 minims of pituitrin was ordered. By mistake the nurse gave a full ampule. The patient went into the most violent and convulsive labor, threatening disaster. She was given a hypodermic of morphine and ether anesthesia begun. In a few minutes the head was on the perineum and the fetus was lifted out by forceps. The clonic contractions continued for 3 days postpartum, being only controlled by the hypodermic administrations of morphine. Evidently the patient had an idiosyncrasy against pituitrin, but who is to determine this fact in advance?

We have used pituitrin for the last three years as a routine in the third stage and feel it has a most beneficial effect in the stimulation of the uterus, in expelling the placenta and also in the control of bleeding following the birth of the placenta. One of my colleagues criticized the use of pituitrin as he claimed it predisposed postpartum hemorrhage. My own opinion is that the bleeding is more the result of Crede while the patient is still under the anesthetic. Another favorite aphorism of Meigs was, "Show me a case of postpartum hemorrhage and I will show you a hasty mismanaged third stage of labor."

The diminution of the loss of blood in the third stage has a powerful effect in establishing immunity from infection in the lying-in.

Patients who are depleted by hemorrhage will be more apt to succumb, in my opinion, to a low grade of infection than they will if spared this unnecessary drain on their vitality.

The specific items which may be enumerated as particularly essential in a programme looking to the reduction of morbidity and mortality may be summed up as follows:

1. Prenatal care which includes a physical examination of every woman as early as possible in her pregnancy, correction of such conditions as focal infections, variations in blood pressure; early symptoms of toxemia, constipation, insomnia and other neuroses; the regular observation of weight; pelvimetry, including also abdominal measurements of McDonald and Ahlfeld after the fifth month; urinalysis monthly, semimonthly or weekly according to indications.

2. *Aseptic care of the patient in labor.* (a.) Avoidance of unnecessary examination per vaginam. All examinations of internal character by rectum or vagina must be by gloved hand. (b.) Patient to be provided with clean environment; boiled towels if no sterile pack is available will protect the field. (c.) Catheterization if necessary to be done with extreme precaution. (d.) All basins and instruments must be boiled, only boiled water to be used in the case throughout. (e.) An extra pair of sterile gloves should be boiled to provide for emergency. (f.) Preparation of patient, enema, shaving of pudenda, sponging with antiseptic solution, pudendal occlusion pack to be applied.

All these can be done in the most primitive surroundings in the poorest home. They are absolutely necessary and constitute the minimum requirements.

3. Watchful waiting in labor is recommended for the average attendant. The specialist should be called for unusual conditions rather than the general surgeon who usually prides himself upon his limited obstetric knowledge.

4. Cesarean section when done under conditions which are favorable has its place. It is by no means a universal panacea for obstetric grief nor is version.

5. Pituitrin may be tolerated in multipara with stasis and the head on the perineum. It is never safe in primipara, nor in cases of dystocia.

Finally, it may be remarked, "How simple, there is nothing new under the sun." Granted, but if we follow these same simple rules we may hope to reduce our maternal mortality of 68 per cent to that of New Zealand 31 per cent or even go them one better and have our record

to rank first in the world—a desideratum devoutly to be wished.

605 Bryant Bldg.

DISCUSSION

DR. R. S. TILLES, St. Louis: I wish to congratulate Doctor Mosher upon his paper. It was certainly enlightening and I thoroughly agree with him that if we could train the general practitioner and midwife to be more careful in their prenatal care of the patient the mortality would be reduced. In my observation in St. Louis among very good friends of mine, Cesarean section is playing a big part. In one case a very reputable and well-dressed professor of obstetrics had decided to do a Cesarean section on a certain case and was in the operating room doing a laparotomy on another patient when this woman was delivered spontaneously. There is no excuse for that. Another case in one of our hospitals had a Cesarean section done because of disproportion between fetus and pelvis. The patient was sectioned and two small fetuses delivered, both of which could have been delivered normally if the patient had been let alone. Many Cesarean sections are done for less reason than this.

In regard to pituitrin in obstetrics, I do not fear pituitrin, but I want to warn against too large doses. To give a patient pituitrin before full dilatation the dose should be not more than two minims. If she reacts to two minims it should be held at two minims or at most, three. If there is no reaction, then three can be carried out at the next dose, but never more than three until you have full dilatation. I think the men who are getting bad results are getting them as the result of too large primary doses.

I have never had in my practice a case of postpartum hemorrhage. Doctor Mosher attributes it to the fact that the Crede is done before the patient is out from the anesthetic. I think that is well taken, but I think it is because I give pituitrin that contracts the uterus. Probably both have some advantage.

DR. C. T. RYLAND, Lexington: Doctor Mosher did not touch upon the effect of twilight sleep in obstetrics. I should like to know what he has to say about it.

DR. LEE DORSETT, St. Louis: I think the paper of Doctor Mosher is one of the most important coming before this meeting. I have had one of the services at our City Hospital and not a week passes that we do not receive some woman who has been in labor twenty-five, thirty, forty-eight hours, and has been treated by men who are not trained properly in obstetrics. They go as far as they know and then the cases are thrown on us to do what we can to relieve them.

As Doctor Mosher stated, the three greatest things we are facing in obstetrics are sepsis, eclampsia and postpartum hemorrhage. I fear the hemorrhages, prepartum and postpartum, more than either of the other conditions. It has been my fortune in the last sixteen months to see some twenty cases of eclampsia and of these twenty cases we had nineteen living mothers. The treatment consists of the use of magnesium sulphate given intramuscularly, and we have been able to control in practically every one of these cases the convulsions of eclampsia. Some six or eight years ago I wrote a paper on the Cesarean section in eclampsia. I was quite enthusiastic over it; but I have since learned that I was wrong—that the immediate delivery of an eclamptic case is not necessary. If we can control the con-

vulsions of eclampsia and induce labor in a great majority of cases we save the mother. Of course some of the babies are already dead, some are premature, but I am sure that by the intramuscular use of magnesium sulphite, (25 per cent solution, 10 to 15 c.c. in the buttocks,) that we can control these cases. It is a central nervous system depressant and a fairly safe drug to use. Given intraspinously or intravenously it is a dangerous drug. In some cases we give two or three or four injections, but in every case the convulsions were controlled, at least greatly lessened.

RADIUM IN GYNECOLOGY*

GEORGE GELLHORN, M.D.

ST. LOUIS

The principal field for radium in gynecology is in the treatment of fibroids and cancer of the uterus; and since it is well known that the majority of such patients first consult their family physicians, it is obviously of importance to the practitioner to know what can be accomplished with radium so as to be able to give intelligent advice.

Until a few years ago, the treatment of fibroids was exclusively surgical. Once the diagnosis of fibroid was made, an operation was clearly indicated. It was then found—and has since been established beyond a doubt—that radium, if applied properly, will check the bleeding in practically every case and will cause a more or less complete shrinkage of the tumor in 80 or more per cent. These results are brought about in three ways. To begin with, the radium rays exert a deleterious effect upon the follicle cells in the ovaries. This means that the follicles no longer ripen but undergo degeneration. No new ova are formed, and where there is no ovulation, there can be no menstruation. The condition, therefore, is one of artificial menopause and has, not inappropriately, been termed a bloodless castration. Secondly, the radium rays influence the tumor cells directly in such a way that the nuclei degenerate and the cell bodies pass through a sort of autolytic process which probably bears some resemblance to involution after childbirth. Finally, the radium, if inserted into the uterine cavity, causes a burn of the endometrium and thereby seals up the source of bleeding.

What made these effects still more attractive was the fact that radium carried with it no mortality (as compared with a death toll, on an average, of about 5 per cent from surgery), very little morbidity, and certain economic advantages such as moderate expense, uninterrupted ability to work, etc.

In spite of all these gratifying results and circumstances, it would, however, be a mistake to assume that surgery has no longer a place in the treatment of fibroids, and to apply radium in one and every case. For not only are there cases where radium produces no effect, but there are also others where its use has distinct disadvantages. The practitioner, therefore, should have some idea about the proper selection of cases for one or the other form of treatment.

Generally speaking, women of forty or over with fibroids of small or moderately large size—let us say, extending not higher than to the umbilicus—are the best subjects for radium treatment; and it will occur to you at once that, proportionately, this is the category of cases you see most frequently. Then there are the patients with "poor surgical risk" who, irrespective of age, do better under radium—the anemic and exsanguinated kind (again a relatively large category), those with high blood pressure or cardiac and renal complications, the women with pulmonary tuberculosis and other respiratory ailments, and, finally, the obese whom no surgeon likes. Add to these two classes of patients the women who will not submit to an operation under any conditions, and you have a rather large percentage of cases—I should say, around 60 per cent of all fibroids—that may successfully be treated with radium.

The remaining 40 per cent must now, as before, be subjected to operation. These are, first, the younger women in the second and third decades of life because we may be able to preserve the uterus for menstruation and possible pregnancy or, at least, the ovaries to ward off the hardships of premature menopause. Second, we shall want to operate on all gigantic fibroids and the large pedunculated ones, particularly those of the submucous variety, because in both of these radium is apt to produce necrosis; and for the same reason degenerated fibroids (suppurating, gangrenous, cystic) are unsuited for radium and should be attacked surgically. Cervical fibroids require operation because they do not respond at all to radiation. Complicating tubo-ovarian inflammation likewise calls for operation as radium is apt to make the infection flare up. Last but not least, in an uncertain diagnosis the operation is far preferable, and if there is the least doubt whether the tumor in question is really a fibroid, the practitioner would do well to have a gynecological consultation before assigning the patient to radium treatment.

In cases of malignancy, whether in the form of a sarcomatous degeneration in the fibroid

*Read as part of a symposium on "The Clinical Use of Radium" before the St. Louis Medical Society, October 28, 1924.

itself or as a complicating body cancer, radium and operation hold each other in the balance. Both methods of treatment are equally justified though I, personally, lean more towards the surgical therapy.

It need hardly be emphasized that these are not hard and fast rules for the treatment of fibroids. Only general principles can be enunciated. Special features in a given case must always receive individual consideration. Thus, a young woman might well have radium if her lowered kidney function makes an operation undesirable; and on the other hand, a patient beyond forty should be operated upon if a ventral hernia, to choose an illustration, or a torn perineum call for surgical intervention.

While in fibroids the influence of radium is, in part at least, an indirect one by way of the ovaries, the radium rays exert a direct and destructive effect upon the malignant tissues in cancer of the uterus. This is not due to a selective action of the rays, as was formerly believed, but to the low vitality of the cancer cells. Paradoxical though it may seem, the cancer cells which themselves are so aggressive and destructive, possess little or no power of resistance. They succumb readily to mechanical, thermic, or chemical injuries which normal cells can well withstand. In the case of radium the incessant bombardment of the high velocity rays which emanate from the radium injures both the normal and the malignant cells, but while the former recover to a certain extent, unless the exposure was excessive, the cancer cells fall an easy prey to the injurious agent.¹ They are killed and cast off, and this explains why even very large cauliflower growths of the cervix melt away as if by magic or deep and irregular craters show a smooth surface within a few weeks. For this reason, radium is the ideal palliative treatment of inoperable cancer, and though in most instances, the cancer cells which were far away from, and not affected by, the radium applied, will grow again and ultimately lead to the death of the patient, one achieves now and then permanent cures. The very worst cases of inoperable cancer of the cervix, however, are not suited for radium treatment. Here where only a thin shell of malignant tissue separates the crater in the vagina from the bladder and rectum, radium application would invariably lead to urinary or rectal fistulae and render the desolate condition immeasurably worse. In this class of cases the acetone treatment which I designed about nineteen years ago, is the only method to promise at least a temporary relief.

In less advanced and in early cases where

surgery may be used with some degree of success, pre-operative or post-operative application of radium has a legitimate place and enhances the chances of permanent cure.

There is a third category of patients in whom the bleeding is due neither to fibroids nor to cancer. These are the cases of adolescent and climacteric, or rather pre-climacteric, hemorrhages. In the latter, if the microscopic examination of uterine scrapings (which, by the way, should precede any and every radium application) has shown no malignancy, radium is the sovereign remedy which in point of promptness, convenience, and safety can not be equalled by any other method of treatment. In juvenile hemorrhages, on the other hand, radium, though its hemostyptic effect is excellent, has a place only occasionally and as a last resort when all other attempts at cure have failed.

There are a few other conditions in which radium may be applied such as certain forms of cervical discharge, pruritus, and condylomata acuminata. They are mentioned here largely to complete the long list of gynecological ailments which can be benefited by radium.

Nothing has been said about dosage and other important details of technique because it is clearly outside of the discussion of this evening. Let us remember, this, however, that in radium we have a wonderful, though still mysterious agent which, like a double-edged sword, can produce marvelous results but may also inflict untold harm. To use it to the welfare of the patient, requires mature judgment which can come only from extensive practical experience.

Metropolitan Building.

¹ There are, however, different degrees of the vulnerability of cancer cells. The more the latter resembles the mother tissue whence they originated, or, to use a technical term, the more they have become "differentiated," the stronger is their resistance to the radium and the greater is the dosage needed to destroy them. A preliminary histological examination will, therefore, give us valuable information not only as to the prognosis of the case but also the amount of radium required in this particular instance.

ORGANIZATION OF THE SOUTH-EAST MISSOURI MEDICAL ASSOCIATION AND MEDICAL PRACTICE IN THE EARLY DAYS.*

Address of the President

G. W. VINYARD, M.D.,
JACKSON, MO.

You have chosen me for the second time as your presiding officer. This is an honor never before conferred upon a member of this Association. The confidence and esteem ac-

*Delivered at the 48th Semi-Annual Meeting of the Southeast Missouri Medical Association, Cape Girardeau, October 21, 1924.

corded me by the membership of this organization touches my heart and I have not words at my command to express my deep sense of gratitude. However, I will say that I appreciate this distinction and will endeavor to discharge the duties of the office faithfully, efficiently and impartially. I believe I fully recognize the responsibility placed upon my shoulders at this particular time. The virility, vigor, and efficiency of this organization depend very largely upon the concentrated effort and industry of the officers in charge. I also realize that the members have a certain degree of responsibility and without their enthusiastic cooperation satisfactory results cannot be fully attained.

This is an association of the physicians of southeast Missouri, organized by the physicians of southeast Missouri, for the physicians of southeast Missouri. It is especially designed for the betterment and development of the medical talent of southeast Missouri and it will be largely what they make it. Local pride should stimulate every respectable physician of this district to take a personal interest in the perpetuity and welfare of this Association. Food for thought, attractive programs, exchange of ideas by discussions, papers and clinics, all tend to disseminate knowledge, enlarge our vision and make us more efficient in the practice of the divine art of medicine and surgery.

I am glad to see so many distinguished members of the medical profession here on this occasion. I hope you will warm up to the old Southeast Missouri Medical Association, come into the fold and share the labors and the comforts, many there be. We have kept the fires burning for you and a light in the window for you for a period of forty-eight years. The light was there long before some of you were born and while you were germinating in the indistinct and nebulous space of the future. But we knew you were coming and everything has been prepared to receive you. Some of you have grown out of your swaddling clothes and have never yet knocked at the door for admission. The officers and members will be glad to admit you and conduct you into full fellowship.

The Southeast Missouri Medical Association was organized through the efforts of Dr. W. W. Watkins, of Libertyville, St. Francois County, Missouri. Dr. Watkins issued the call for a meeting in the City of Cape Girardeau, on June 1, 1877, and the following physicians responded to the call in person: J. W. Cannon, Jackson, Cape Girardeau County; Patrick Gilroy, Cape Girardeau, Cape Girardeau County; E. W. Horrell, New Mad-

rid, New Madrid County; C. A. Mann, Perryville, Perry County; William Nifong, Fredericktown, Madison County; W. A. Nunn, Gordonville, Cape Girardeau County; J. D. Porterfield, Sr., Commerce, Scott County; J. H. Rider, Cape Girardeau, Cape Girardeau County; A. E. Simpson, Charleston, Mississippi County; S. E. Strong, St. Marys, St. Genevieve County; W. W. Watkins, Libertyville, St. Francois County; C. G. Wilson, Cape Girardeau, Cape Girardeau County; W. B. Wilson, Cape Girardeau, Cape Girardeau County.

The following physicians responded by letter and were enrolled as charter members: O. W. Cline, Frohna, Perry County; F. R. Newberry, Fredericktown, Madison County; G. W. Vinyard, Longtown, Perry County; T. A. Winn, Libertyville, St. Francois County.

The organization was effected on the date above mentioned. Dr. W. B. Wilson, of Cape Girardeau, was the first president and Dr. W. W. Watkins was the first secretary. The Association became a flourishing institution from the start. It has convened twice annually ever since its organization. It numbers among its members the best and most progressive men in this district. It has served as a kind of post-graduate center for many of us weaker brethren who did not have the means to go abroad for better instruction. I know and can testify that I have been greatly benefited by the Southeast Missouri Medical Association. The laity have also been greatly benefited through their medical advisers who worshipped at the shrine of this splendid organization.

In the earlier days the profession had to make great sacrifices to maintain the Southeast Missouri Medical Association. There were no railroads to speak of in Southeast Missouri and these doctors traveled over land, through rain and flood, on horseback, in carriages and spring wagons, to get to these semi-annual meetings. And they always got there in sufficient numbers to have good meetings, both scientific and social. The people were always glad to entertain them and generally did themselves proud. The laity, both men and women, turned out in liberal numbers and strove to make the visiting doctors enjoy themselves. The backwoods country doctor could enjoy a little recreation at these meetings, bask in the smiles of the fairest women, drink delectable high-balls, made *secundum artem*, deploy his intellectual faculties in entertaining his brethren with his wonderful exploits in cross-roads surgery.

We had our Colonels Sellers in medicine then as we have them now. The modern specimen of today is more polished and adroit

in covering up his exaggerated ego than his brother of olden times. The ancient specimen would often get his dialect mixed and speak of "pathonogmonic" symptoms, lesions of the "laryngo-spinal duct," and such anatomical monstrosities as "bifurcation of the rectum," and so on. However, we also had our scholarly men who always added something to the sum total of our knowledge of medicine and surgery at each meeting. I will refer to some of them by name, but only to those who have finished their work and gone to their reward:

Dr. O. W. Cline, of Perry County, was the poet laureate of the Southeast Missouri Medical Association. He wrote many interesting papers for the Association and frequently interspersed them with original rhymes. Some of his medical papers were written entirely in rhyme. He was a great stickler for the strict observance of the constitution and by-laws. When he was at a meeting nothing could be put over contrary to the explicit terms of the constitution and by-laws. A member like him would be a God's blessing to the Association today. Dr. Cline was well educated and a good speaker and always added much to any meeting he attended.

Dr. C. A. Mann, of Perryville, Perry County, was the orator of the Association in his day and time. He was a fine after dinner speaker and toastmaster and came in very handy at the public entertainments given to the Association by the different towns in which meetings were held. Dr. Mann was a very regular attendant at all meetings and a great booster for medical organization.

Dr. L. T. Hall, of Potosi, Washington County, succeeded Dr. Mann as orator of the Association. He was not so grandiloquent as Dr. Mann, but his sentences were well rounded, his speech smooth and musical and pleasant to listen to. Dr. Hall was an active worker in the Southeast Missouri Medical Association for many years and a most useful and instructive member until a medical politician came upon the scene and "soured" Dr. Hall for all time. A medical politician who had not paid his dues for sixteen years came into a meeting and carried off an endorsement. This medical politician, I think, had not attended a meeting of the Association for sixteen years and I would guess never attended a half dozen meetings in his life. This proceeding was too much for Dr. Hall and he lost interest in all further progress of the Association. Dr. L. T. Hall was a gentleman of nobility of character and a man of fine sensibilities.

Dr. A. E. Simpson, of Charleston, Mississippi County, was a power for good in the Southeast Missouri Medical Association. He

was a very regular attendant. He took a great interest in the welfare of the organization. He was an allround practical and successful country doctor who was ever ready to meet any emergency with extraordinary good sense and judgment. Dr. Simpson was not noted for oratorical displays but his ideas were always sound, well expressed and to the point. He enjoyed the profound respect of his fellows. In the battle of life he fought a good fight, kept the faith, and passed to the Great Beyond leaving a good name to posterity.

Dr. A. A. Bondurant was an industrious student. He wrote many papers of great merit for the Association and was a faithful attendant at all of its meetings. At his death the Association lost a very useful member. Dr. Bondurant was a resident of Mississippi County for many years and later moved to Cairo, Illinois, where he died. He never surrendered his affiliation nor gave up his interest in the Southeast Missouri Medical Association.

Dr. William Nifong can be numbered as one of the loyal friends of the Southeast Missouri Medical Association. He lived and died in Fredericktown, Madison County. When our annual meetings were by law held in Fredericktown, Dr. Nifong always furnished the hall free of rent. He presented papers and clinical specimens at frequent intervals and was a regular attendant. He lived to a great age and passed to the Great Beyond July 1, 1924, with unblemished character and unsullied faith in the glorious promises for the future life.

Cape Girardeau County and Cape Girardeau City used to be prominently and actively identified with the Southeast Missouri Medical Association in the early days of its history, but it is not so now. This county should rank high in the history of medical progress because of the fact that the birth of the Southeast Missouri Medical Association was staged in Cape Girardeau County. In the City of Cape Girardeau the breath of life was breathed into this virile organization and it became a living creature and has shed its beneficent influence over the medical fraternity of Southeast Missouri for a period of forty-eight years, helping to make the physicians better and broader men and also enabling them to render better and more efficient service to their clientele. It seems to me that this is a great honor which should be appreciated by the doctors of Cape Girardeau County and especially the physicians of Cape Girardeau City but, taking them as a whole, it is not. I can see in my mind's eye these thirteen medical heroes, like the Wise Men of the East, mounting their horses and wending their way to Cape Girardeau County for the purpose of organizing the Southeast

Missouri Medical Association and starting it on its mission for good. Among the physicians of Cape Girardeau County who are now dead but who actively cooperated with the Southeast Missouri Medical Association, I can name W. B. Wilson, C. G. Wilson, J. H. Rider, Samuel S. Harris, E. R. Harris, C. A. Peterson, J. W. Cannon and John D. Porterfield, Sr. These physicians stood high in the ranks of the profession in their day and time. They were all members of the Southeast Missouri Medical Association. Men of their class are still living in Cape Girardeau County.

I regret to say there is a small modicum of the medical men of this locality and other localities that are of the jackal type. Their joy is in stealing each other's cases. Their souls would rattle in a mustard seed. They are little, pusillanimous, envious, and filled with hate, malice and jealousy. Fee-splitters, character assassins, out of harmony with about everything that is good or honorable in a medical way. No ethical character, no sympathy with ethical organizations. Everything that bespeaks progress and harmony must withstand the blighting influences of this depraved bunch of medical morons. The Lord neglected this class in the assembling of their anatomical machinery and cerebral centers. Parts are missing, screws are loose and wiring defective. They are not altogether responsible for their imperfections, therefore, you must be charitable with them and patient, every trying to lead them into the ways of rectitude and ethical manners.

In organization there is strength. Almost every other vocation has its organization for self-protection. The lawyers have their bar associations. The clergy have their alliance. The merchant, the banker and many other industrial activities have their special organizations. In unity there is strength. We doctors must hang together or hang separately on the hook of discontent and suffer the humiliation of seeing our noble profession discredited by the fantastic and baseless theories of the parasites and buzzards that infest the body medical of today. Organization is one potent remedy and every respectable medical practitioner should put his shoulder to the wheel and join with his fellows in perpetuating this great work of medical organization.

I love the medical profession, not so much for what it has done for me individually, but for what it is doing for the world and humanity in general. A member of the medical profession must be exceedingly common when I cannot respect him, associate with him and like him. Of all my associates I prefer the doctor with his grim wit and practical manners. He

usually is a person that does things. I love him and sympathize with him because he is engaged in a constant battle with that Grim Messenger that menaces us all. He braves the darts of contagion and even The Valley and the Shadow, risking his own life for his patient and for the benefit of humanity. And if the battle is lost he does not desert the field and abandon his patient to his fate; he lingers at the bedside even unto the end seeking to pluck the thorns from the pillow of death. He does this not infrequently where his unselfish devotion goes unappreciated.

If I had to live my life over again I would devote it to the practice of medicine, notwithstanding its physical hardships of exposure to inclement weather, midnight toil, its sadness and disappointments. However, there are many roses scattered along the pathway of the faithful physician. When he deserves it he has the respect and trusting confidence of the community in which he lives and labors.

I love the society of the true physician. I love to meet him in conventions and associations. The old dog loves to join in the chase although his speed has vanished and his vision has darkened. I am in the predicament of the old dog. I have reached the frigid zone of life and the days have come when there is but little pleasure in them and much study is a weariness to the flesh. The body is but the tenement of the soul and it goes the way of all other tenements in the course of time. I adjure you to use the talent the Lord thy God hath given thee to a good purpose. Be able to give a good accounting at the end. It is up to you to use your talent for good or evil. Do not use it solely for what money it may bring, but for the good you may do in the world. Medicine is an altruistic science. Medicine is not a gainful occupation. The hardest worked doctor dies comparatively poor in this world's goods. If money is the goal of your ambition the commercial world is open and the possibilities for gain are unlimited, as is well illustrated in the life of Henry Ford who accumulated a billion dollars in about twenty years. Ford's immense wealth is but dross in comparison to what you are doing daily for suffering humanity. You are rich men, perhaps not in worldly goods, but in service. I admonish you all to cultivate a more fraternal spirit among you. Apply the Golden Rule to your daily walk of life. It will redound to your credit and elevate the standing of your noble profession among the laity. Exercise the utmost charity toward the weaknesses and frailties of your fellow-practitioner. Remember that the very elect in the earliest times had their Ananiases and their Judas Iscariots.

He who sees further than others can give the world vision; he who stands steadier than others can give it character; he who forgets himself in doing things for others can give it religion. It is more blessed to give than to receive, especially when exercising charity, forbearance, good will, and a forgiving spirit toward our fellow-man and our colleagues in the medical profession. Well balanced physicians are working in cooperation with each other and also in competition with each other. But, like every other good thing, competition is liable to be abused. It is good only so long as it is open and fair. If it ceases to be open and fair it is not competition, but cheating.

"Here's to the man whose hand
Is firm when he clasps your own—
Like a grasp of steel
That makes you feel
You're not in the world alone.

"Here's to the man whose laugh
Puts the sombre clouds to rout—
The man who's fair
And kind and square
To the one that's down and out."

REMINISCENCES OF THE MEDICAL PROFESSION OF SOUTHEAST MISSOURI IN BY-GONE DAYS.*

ROBERT T. HENDERSON, M.D.,

JACKSON, MO.

As late as 1860 this section of the country was regarded as the swamps of southeast Missouri, filled as it was with bogs and swamps and noted for its non-progressiveness, coon skins, sand bars and mosquitoes. Our political representatives were ignored in our legislative and other assemblies. Our preachers took back seats at conference and synod, whilst it was presumed that a swamp doctor never took any interest in scientific medicine and indeed was incapable of comprehending the most simple problems of the profession. The masses were regarded, with honorable exceptions, as a kind of connecting link in the great chain of the evolution of man from the lower forms of life. True worth may lie hidden for an indefinite time and the most rugged stone may contain the most precious metals. The most uninviting localities may contain germs of the greatest possibilities that lie dormant until quickened into life by a change of environment. The germs of wealth contained in these same bogs and swamps have more recently come to be appreciated by the public and they are destined to become, in the not far distant

future, the garden spot of the state. Our hills contain inexhaustible beds of iron, lead and other minerals. Our forests abound with timber unexcelled in any other part of the state. From our hilltops and valleys gush forth health-restoring and life-giving springs, inviting the suffering thousands to come and drink and bathe and be healed of their every ill. Our denizens have aroused from their lethargic slumber and each vies with his neighbor in the improvements of his farm, stock and surroundings. Costly school buildings and fine churches send their spires heavenward. Happiness, contentment and thrift, the products of energy and industry, are seen on every hand. The bogs and swamps are rapidly being converted into fine farms and beautiful gardens. Our political representatives are being honored with speakerships and chairmanships in our legislative assemblies. Our ministers are progressing towards the front rank. Our doctors—well if some of them are so fortunate as to be successful politicians they occasionally make their mark in the world.

It is of the profession of medicine of southeast Missouri that I would speak. Much good material I find here—men with capabilities of attaining high positions in the profession have ranked among the physicians in this section since its early settlement. Nearly every county in this district can boast of a Cannon, a Harris, a Wheeler, a Moore and a Lucius Robb among its honored dead and today, I am proud to say, the profession of medicine in this district numbers among its membership intellects as high as can be found in any other section. That southeast Missouri has and still abounds with the most ignorant pretenders and quacks is an undeniable fact and that their existence among us at this late day is largely due to the indifference of the regular profession is also an indisputable as well as a disgraceful fact. We have grown up surrounded by these leeches and slayers of our confiding populace. We plod along through the wearisome labors and duties of life without duly appreciating the appalling sacrifice of human life and the untold amount of suffering incurred at the hands of these vampires of humanity. We owe it much less to ourselves than to the people that this class receive greater attention at our hands. Several attempts at organizing for the purpose of advancing the science and elevating the standard of the profession have been made during the past in the different counties of this district.

The late Dr. J. W. Cannon informed me that he had a boyish recollection of a meeting of physicians at the old courthouse in Jackson,

*Delivered at the 48th Semi-Annual Meeting of the Southeast Missouri Medical Association at Cape Girardeau, October 21, 1924.

He could not say in what year, how many or who were present. From an answer given some one on the street by the late Dr. Davis, he was led to infer that delegates were appointed to the meeting of the American Medical Association held in New Orleans in 1851. An organization of physicians was attempted previous to that date and a schedule of prices was established. It was but a short time, however, until trouble came up concerning the price list, when the tie that bound them was severed, the organization dissolved and each sailed for his own port.

An organization for the purpose of regulating fees was formed in Iron County before the Civil War, but nothing like a regular organization of the profession was attempted. A similar organization was formed by the physicians of Charleston, Mississippi County, many years ago, but, like all societies of the kind which attempted to regulate fees, "bustled up" and became a recollection of the past.

The Cape Girardeau Medical Association was organized November 17, 1866; R. G. Stockton, M.D., president; E. C. Dickenson, M.D., vice-president; J. W. Cannon, M.D., recording secretary; W. B. Wilson, M.D., corresponding secretary; D. Y. Pace, M.D., treasurer; with a membership of ten besides the officers mentioned. A constitution and by-laws, the Code of Ethics of the American Medical Association, and a fee bill were adopted. A few interesting meetings were held. Just when its warmest friends were congratulating themselves over the bright prospects of this young organization, the fee bill gave rise to some discord. The interest of the members began to wane and during the early part of 1867 the Association became defunct.

July 1, 1869, a number of physicians met in Malden for the purpose of organizing a District Medical Association, embracing Stoddard, Dunklin, New Madrid and Pemiscot counties. They organized with a membership of twenty-two, adopted a constitution and by-laws and dubbed the organization "The Little River Valley Medical Association." They had quite an animated discussion on various medical subjects, elected officers, appointed various committees and essayists, after which they adjourned to meet again in Malden on the first Tuesday in October, 1869. The autumnal frosts of October, however, were too much for this promising young organization. Its constitution possibly having been weakened by an overcharge of miasm, or the microorganism familiarly known as *Bacillus malariae*, the Association was forced to succumb. A constitutional number failing

to respond at roll call, it never survived the shock and demised without another effort, verifying the fact that, "Full many a flower is born to blush unseen and waste its sweetness on the desert air." Thus it has been with every effort at organizing the profession of medicine in southeast Missouri. The history of one applies equally to all. Failure had been the result in every instance.

From the ashes of these ruins the Southeast Missouri Medical Association sprang. It was organized on the first day of June, 1877. The following physicians were present in person: Drs. W. W. Watkin, C. G. Wilson, W. A. Nunn, C. A. Mann, William Nifong, J. H. Rider, E. W. Horrell, A. E. Simpson, J. W. Cannon, W. B. Wilson, J. D. Porterfield, Sr., S. E. Strong and Patrick Gilroy. The following physicians were added to the list of organizers upon their own application: Drs. F. R. Newberry, O. W. Cline, George W. Vinyard and T. A. Winn, making a total membership of seventeen.

Dr. W. B. Wilson was chosen president; Dr. A. E. Simpson, vice-president; Dr. W. W. Watkins, secretary; Dr. C. A. Mann, treasurer. It is unnecessary for me to say that any enterprise under the guardianship of these gentlemen was bound to succeed, as they are well known for their preeminent ability throughout this section and the result has proven that the right men were chosen in the right place. Having the very best interests of the profession at heart they laid broad and deep a firm foundation on which you have builded to your present proportions.

Two of the organizers never attended a meeting after its organization, Drs. Horrell and Gilroy. They died "in the harness" and true to the cause. Today but one survivor of the charter members is living, Dr. George W. Vinyard, our honored president. This Association has never failed to convene twice annually since its organization forty-eight years ago. During its earlier existence some of its meetings were slimly attended, but lack of numbers was always compensated for by the interest of those in attendance, so that I can say the progress and history of the Association have thus far been both pleasant and profitable. You now number among your membership the best talent of the profession in this district, men enthusiastic and devoted to the best interests of the science of medicine. There are still a number of excellent men outside who ought to be in; we need every regular physician in southeast Missouri; indeed every one should deem it his imperative duty to give to this Association his undivided support. He

owes it to the honorable profession of which he is a member; he owes it to himself; he owes it to the people among whom he labors.

I know there are those who ask, "What good has been accomplished? What original discoveries made? What new theories have been advanced for our amusement or edification? What light has been thrown upon the field to better guide us in studying the problems of disease? What new remedy has been presented and its therapeutic or healing power disclosed? Finally, what fallacy or false doctrine has been exposed and overturned, what truth established?" I pause not to answer these questions specifically. In the presence of this audience it is useless. I do not think, gentlemen, that we can overestimate the advantages that may accrue to us from our semi-annual meetings. I have never yet gone from one of our meetings without feeling that I have been well repaid for time spent and expenses incurred. There is nothing that so profits the practitioner, be he young or old, as bringing his cases, such as may be striking, and his methods of treatment, and subjecting them to the crucible of discussion by his conferees. Who among us has not seen his idol broken into fragments at his feet? Who has not come into our hall with a theory which, to himself, seemed so plausible that he had come to accept it not as a theory but as a fact? Blinded until his eyes were opened, only to see his facts dissolve in the crucible of counter experience; his arguments, which he had offered in support and which he regarded as unanswerable, proven even to himself to be sophistry when subjected to the logic of some friend in debate. Thus we have our errors corrected and we are guided to the truth. The old learn from the young, the young from the old. Each thus brings his treasure into the common storehouse; medical science is advanced, the good of mankind promoted. The ocean with its immeasurable depths is made up of little drops of water; the unlimited expanse of its shores, of little grains of sand. So the sum of all knowledge is made up of the little that each toiler can bring.

Since the germ theory has been so thoroughly developed sanitary science has made such advances that the causes of disease are today regarded to depend on specific germs and treatment is sought to be specific; and doubtless as these germs are differentiated in the various diseases, especially the infections, our treatment will become, through our various experimental stations such as the Rockefeller Institute, more specific. In cases where the specific germ has not been discovered or dif-

ferentiated our treatment will continue to be expectant and conserving the patient's strength and vital forces by means of proper sanitation, nursing and proper feeding.

Perhaps it is expected that I should say something of the earlier experiences of the doctor as to his daily life and duties. Our only means of rapid locomotion was on horseback and over roads of every kind except those called good—bridle paths and roads with mud from six to twelve inches deep, with ruts that were unsafe for horse and rider. To avoid these the neighbor's fence must be laid down and replaced. Sometimes you did not approach the residence of your patient by one-eighth or one-quarter of a mile. Then you left your horse and proceeded in primitive style on foot, through the fields, with perhaps a hill to climb, to say nothing of the briars, underbrush, logs and the farmer's dogs. This in fair and pleasant weather was not objectionable, but in rain was anything but pleasant. After the severe trials and fatigue of this character you might feel that the inner man needed refreshment. How were these cravings to be satisfied? At many places where you could eat, your time would not permit and at others you could not eat if food were placed before you. So frequently did this state of things exist that your speaker trained himself to eschew dinner in all cases when entirely engaged and this was his general practice when visiting patients in the country. At places where everything was in apple-pie order (and there were many such places) so great was the desire to acquit themselves properly and do justice to the doctor that two hours would not suffice for this indulgence, greatly interfering with the doctor's obligations to other patients. After a few years this state of things changed and the facilities for locomotion improved. Civilization encroached upon us and the doctor was seen to be "sporting" a buggy, but the unreasonable man was not yet happy, for sometimes the road would give out and he must walk or resort to the horse. Not infrequently he would receive a call while in his buggy upon the road to go some place where the road did not go. To obviate this difficulty he carried his saddle with him in the buggy and when thwarted by these untoward circumstances he would unharness, change his style of progression and cheerfully mount his Rosanante, rejoicing that he had so easily overcome the difficulty. With these difficulties enhanced by dark and rainy days the doctor's life could not be called very agreeable and pleasant; yet he was frequently told that he earned his money very easily and could wait indefinitely for the

compensation which he felt he had honestly and fairly earned. Sometimes he was roundly abused because he did not attend the sick for pure benevolence sake. So strong was this sentiment with many that they never paid, and rejoiced that they had headed off the doctor by repudiation. Perhaps some of you have had a similar experience in these days of reform and progress.

Compare the status of the physician of to-day. Smooth sidewalks and streets with electric lights along the curbstone, over which he can visit his patients night or day pleasantly and rapidly, with good turnpikes, in enclosed automobiles as protection from storms and rains and blustering winter. Darkness has no terror or danger with the lamps to illuminate the way. Many of you who perhaps do quite a country practice may have a faint idea of the labors and toils and perils of the early physician, but it is a very faint idea, for you cannot fully appreciate his situation until you go through it. Judging from appearances, repudiation is not so frequent now as in the olden times and perhaps I should have said there is no individual in the community who gives more of his earnings to the poor and impecunious than the practicing physician. I say this from observation as well as experience. A few thousand dollars of my honest toil has gone "where the woodbine twineth," and I hope it will always stay there.

"God and the doctor we worship and adore,
But only when in danger, not before;
The danger o'er, both are alike requited,
God is forgotten and the doctor slighted."

ROENTGEN RAY IN DIAGNOSIS OF PERICARDITIS

The experimental work done by George W. Holmes, Boston (*Journal A. M. A.*, Nov. 29, 1924), consisted of studies made on fresh hearts suspended in mediums of varying specific gravity, the lightest being air and the heaviest being salt solution with a specific gravity of 1.036. The heart was visible as a shadow of increased density until the specific gravity surrounding the medium reached 1.000, at which time it disappeared, and again became visible as a shadow of diminished density when the specific gravity reached 1.036. The shadow of the heart itself was not visible when the density of the medium corresponded to that of the pericardial effusions. These experiments, with a careful study of the cases examined and those reported in the literature, seems to prove that it is not possible to visualize the heart within a fluid-filled pericardium, and that, in cases in which the heart seems to be visible, is is probable that the fluid is in the mediastinum and not in the pericardial sac. A second group of experiments consisted in the injection of the pericardium in the cadaver. This confirmed the work of Morris and Bader and others, who have found that the earliest changes in the shape of the heart shadow are seen in the region of the sinus at

the base of the heart and along the posterior border. In the anteroposterior view of the shadow, there is a widening of the supracardiac area and obliteration of the normal curve of the left auricle with the injection of about 200 c.c. Amounts of fluid less than this produced no appreciable change. As the amount of fluid increases, the change in shape of the heart shadow becomes general. The clinical data were obtained from the records of sixty cases at the Massachusetts General Hospital which were diagnosed as probable pericarditis. From this material, and a review of the literature, it was concluded that the roentgenographic findings in their order of importance in pericarditis with effusion are: the heart shadow; change of shape with the change of position of the patient; obliteration of the normal outline of various chambers of the heart; changes in the shape of the angle formed by the posterior border of heart, the diaphragm and the spine, and faint or absent pulsations. Holmes has examined 2,950 patients for possible disease of the heart, and found roentgen-ray evidence of disease of the pericardium in thirty-six. Of these thirty-six cases, eight were proved to have fluid within the pericardium by puncture or necropsy. In thirteen additional cases, the clinical findings were not confirmed. From these data, it would seem that the roentgen-ray examination is of considerable value in making a positive diagnosis of pericarditis, and that negative roentgen-ray findings make a negative diagnosis probable. z

THE SYMPTOMATOLOGY OF MEASLES MODIFIED BY LATE SERUM IMMUNIZATION

The phophylatic values of convalescent measles serum was investigated by Joseph C. Regan, New York (*Journal A. M. A.*, Nov. 29, 1924), in a series of measles cases. The convalescent serum used was obtained from five different patients, aged 14, 18, 20, 21 and 22 years. A mixed serum from at least two or three of these donors was given at each immunization. This serum was obtained on the fifth, seventh and eighth days of convalescence. Four patients were injected during the invasion period. All of these patients received 10 c.c. of serum by the intramuscular route, and one in addition 5 c.c. intravenously. The serum seemed to have a slight effect on the course of the disease, especially when given intravenously, by modifying the severity; but it did not influence any of the characteristic symptoms. When serum was injected in the incubation stage the duration of the invasion was materially shortened in six patients. In two it was lacking entirely, in two it lasted only one day, and in two other patients only two days. In one child it was prolonged for six days, during the first four of which only a rise of temperature without any characteristic symptoms was present. In six patients, no coryza was noticed, while in eight of the nine remaining, it was very slight. In eight patients Koplik's spots were entirely lacking. Of the seven remaining children, they were decidedly abortive in two, and atypical in five. In six patients, there was practically no change in the appearance of the faucial mucosa and soft palate, while in nine others there were mild congestive changes. In only a few was a macular eruption noted on the soft palate. The eruption, while altered in some cases, remained more characteristic than any of the other cardinal symptoms. The highest temperature in five patients was between 101 and 102 F., and in five others between 102 and 103. The constitutional symptoms were much milder than in nonimmunized children. Among the fifteen cases of modified measles studied, only one patient developed a complication that was an acute otitis media.

THE JOURNAL

OF THE

Missouri State Medical Association

APRIL, 1925

EDITORIALS

LICENSE OF DR. WALDO BRIGGS REVOKED—TWO OTHER PHYSICIANS SURRENDER THEIR LICENSES

On March 20, the state board of health revoked the license of Dr. Waldo Briggs, dean and owner of the St. Louis College of Physicians and Surgeons. The charge in the complaint against Dr. Briggs which was sworn to by Joseph R. Sintzell, former secretary of the St. Louis College of Physicians and Surgeons, was that Dr. Briggs was a person of bad moral character "in that for a long time he has participated in the sale of medical credentials, falsifying records, assisting in the preparation and sale of false and fraudulent credentials and medical diplomas purporting to evidence qualifications to practice medicine and surgery; that in his activities in connection with the sale of such degrees and medical diplomas he has been in business and associating with one Robert Adcox, known as the clearing house of the medical diploma mill ring, and that he has accepted large sums of money from the said Dr. Adcox in exchange for literary diplomas and degrees."

The board found Dr. Briggs guilty of the charge and revoked his license "for the period of time until the said Dr. Waldo Briggs shall close permanently the St. Louis College of Physicians and Surgeons, of St. Louis, Missouri, or reorganize or cause to be reorganized, said medical college and equipped as a reputable medical college within the meaning of the medical practice act of the State of Missouri as such condition shall be determined by the state board of health of Missouri as required by said board by said act, at which time this order of revocation shall, upon satisfactory proof that said college meets the requirements of a reputable medical college, as aforesaid, be set aside and said license reissued."

The board met at St. Louis on March 16, to hear testimony in the trial of some sixty physicians who had been cited to show cause why their licenses should not be revoked. The names of all these physicians were published

in our March issue. Nearly all of them were charged with having made false and fraudulent statements concerning their preliminary qualifications and their attendance at medical schools.

The trial of Dr. Briggs occupied four days. During that time two physicians, Dr. Wm. F. Wagner, of St. Louis, and Dr. A. J. Lofgreen, Health Commissioner of Kirkwood, St. Louis County, pleaded guilty to the charges against them and voluntarily surrendered their licenses to the board.

Two of those cited to appear for trial, Dr. Otto C. Hanser and Dr. Hugo Baepler, both of St. Louis, asked the circuit court of St. Louis to issue a restraining order preventing the board from proceeding with the trial on the charges against them. The petition of these physicians averred that the section of the statute under which the board of health is attempting to revoke their license is unconstitutional because it violates the provision that no person shall be deprived of life, liberty or property without due process of law. The circuit court heard the arguments on these petitions Tuesday, March 24, and denied the petitions.

During the trial of Dr. Briggs the members of the board of health present at the proceedings put in a strenuous week. Among the witnesses against Dr. Briggs was Dr. F. C. Waite, of the Western Reserve Medical School, who inspected the St. Louis College of Physicians and Surgeons with the members of the state board of health and testified that the records, equipment and teaching facilities were most deplorably inadequate. The records were produced at the trial and found to be in a desperate condition, some pages being mutilated, some missing; the grades not entered in some instances and in others not conforming to the grades marked on the application for an examination, and figures frequently altered. Wm. P. Sachs, of St. Louis, was another witness. He said he had issued numerous high school certificates to persons who had entered or intended to enter the St. Louis College of Physicians and Surgeons although he had not examined these persons, in fact, did not see the persons at all, the certificates being for the most part given to Dr. Robert Adcox, the clearing house for the diploma mill.

Dr. Briggs was represented by Mr. Andrew Maroney, an attorney at St. Louis, the board of health counsel being Assistant Attorney General, Mr. J. Henry Caruthers, and Mr. Morton Jourdan, of St. Louis. The members of the board of health at the trial were: Dr. Emmett P. North, St. Louis, president of the board; Dr. James Stewart, secretary of the board; Dr. Jas. R. McVay, of Kansas City;

Dr. T. H. Wilcoxon, of Bowling Green, and Dr. T. A. Son, of Bonne Terre. All of these voted for the revocation of Dr. Briggs' license except Dr. Son, who was not present when the board went into executive session.

On March 23, Dr. Briggs resigned from membership in the St. Louis Medical Society, which, of course, severs his connection with the State Medical Association and the American Medical Association.

Since writing the above Dr. Briggs has notified the state board of health that he will comply with the ruling of the board and requested the board of health to confer with the board of trustees of the St. Louis College of Physicians and Surgeons with the view of reorganizing the school to meet the requirements of the medical practice act and establish a reputable school.

THE ANNUAL MEETING AT KANSAS CITY.

BALTIMORE HOTEL, MAY 5, 6, 7.

The arrangements for the 68th Annual Meeting of the Association have progressed very satisfactorily so that we can announce a most interesting program of clinics and papers and attractive entertainments. The preliminary program is published on another page.

The House of Delegates will hold its first session on Monday, May 4, one day in advance of the regular scientific proceedings. This will give time for the House to deliberate more leisurely upon the questions before it and for committees to make reports and propose new work.

Beginning Tuesday, May 5, clinics will be conducted at the Kansas City General Hospital during the morning of each day of the meeting. These clinics will include medical cases, surgical cases and cases in the various specialties. In the afternoons, papers will be read in the scientific sessions. These will include a symposium on diseases of the upper abdomen, a symposium on goiter and a symposium on obstetrics. In the evenings there will be a public health meeting on Tuesday, May 5, and the president's reception on Wednesday, May 6. For these meetings we shall have several guests. Dr. Morris Fishbein, editor of the Journal of the American Medical Association, Dr. John M. Dodson, secretary of the Bureau of Health and Public Instruction of the American Medical Association, who has given much attention to the subject of periodic health examination, and Dr. F. C. Waite, of the Western Reserve Medical

School, who made a survey of the medical profession of the state and the medical schools in conjunction with the state board of health. The movement to encourage periodic health examination should be more generally observed in Missouri and we hope that the discussion by Dr. Dodson and others who will speak on public health matters at this session will stimulate our members to take an active interest in the subject.

A smoker will be given to the members by the members by the Jackson County Medical Society on Thursday night. The golf tournament will be held on Friday afternoon and a golf dinner that night.

The meetings of the Woman's Auxiliary will begin with a luncheon at noon on Tuesday, May 5, and Wednesday there will be morning and afternoon meetings and a meeting on Thursday morning for the discussion of the regular work of the Auxiliary. Thursday afternoon has been set aside for an auto ride and musical tea at the Country Club and for Thursday night the Auxiliary has planned a theater party for the women.

The complete program will be published in the May JOURNAL.

HOTELS AND RATES FOR KANSAS CITY MEETING MAY 5, 6, 7.

All the hotels listed below are members of the Convention Bureau of Kansas City and are recommended by the bureau. In making your reservations please indicate the kind of room you want and how many people will occupy it with you; also inform the hotel on what day you expect to arrive. Make your reservations direct with the hotel. All meetings will be held in the Baltimore Hotel which is headquarters for the Association.

HOTEL RATES

Name		Without Bath	With Bath
Baltimore	Sgle.	\$2.50 to \$3.50	\$3.00 to \$12.00
	Dble.	4.00 to 5.00	5.00 to 15.00
Bray	Sgle.	1.50 to 2.00	2.00 to 3.00
	Dble.	2.50 to 3.00	3.00 to 5.00
Central	Sgle.	1.50	2.00 to 2.50
	Dble.	2.50	3.00 to 3.50
Coates House	Sgle.	1.25 to 3.00	2.50 to 5.00
	Dble.	2.00 to 4.00	4.00 to 7.00
Densmore	Sgle.	1.00 to 1.50	2.00 to 3.00
	Dble.	2.00 to 2.50	3.00 to 4.00
Dixon	Sgle.	1.50 to 2.00	2.50 to 3.00
	Dble.	2.50 to 3.00	4.00 to 5.00
Glennon	Sgle.	2.00	2.50 to 4.00
	Dble.	3.50 to 4.00	4.00 to 6.00
Keystone	Sgle.	1.25 to 1.50	2.00 to 2.50
	Dble.	1.75 to 2.00	3.00 to 3.50
Kupper	Sgle.	1.50 to 3.00	3.00 to 5.00
	Dble.	3.00 to 4.00	4.00 to 8.00
Mercer	Sgle.	1.50 to 2.50	2.50 to 5.00
	Dble.	2.50 to 3.50	3.50 to 6.00
Moore	Sgle.	1.00 to 1.50	1.50 to 2.50
	Dble.	2.00 to 2.50	3.00 to 4.00
Muehlebach	Sgle.	3.00 to 3.50	3.50 to 9.00
	Dble.	4.50 to 5.00	5.00 to 12.00

Name		Without Bath	With Bath
Savoy	Sgle.	1.50 to 2.50	2.00 to 4.00
	Dble.	2.50 to 3.50	3.00 to 6.00
Sexton	Sgle.	1.50 to 2.50	2.50 to 4.00
	Dble.	2.50 to 3.50	4.00 to 6.00
Sherman	Sgle.	1.50 to 2.00	2.50 to 3.50
	Dble.	2.50 to 3.00	3.50 to 5.00
Stats	Sgle.		2.00 to 3.50
	Dble.		3.50 to 7.50
Tanner	Sgle.	1.25 to 1.50	1.50 to 2.00
	Dble.	2.00 to 2.50	3.00 to 4.00
Washington	Sgle.	1.50 to 2.00	2.00 to 3.00
	Dble.	2.00 to 3.00	3.00 to 5.00
Westgate	Sgle.		1.50 to 3.50
	Dble.		3.00 to 5.00

DR. JAMES STEWART, SECRETARY OF STATE BOARD OF HEALTH

The appointment of Dr. James Stewart, St. Louis, as secretary of the state board of health will meet with the general approval of the medical profession. Those who know Dr. Stewart are aware that he possesses those qualities of organization, direction and supervision without which no one can successfully fill the important position of secretary of the state board of health and state health commissioner. He brings to the position the prestige gained through the organization, control and direction of the division of hygiene of the St. Louis Board of Education which is generally recognized throughout the country as one of the most efficient hygiene divisions of the educational departments in the various states. Under Dr. Stewart's direction the division of hygiene at St. Louis has successfully fought several legal battles with opponents of vaccination who attempted to compel the Board of Education to admit unvaccinated children into the public schools. Undoubtedly it is due to this determined stand on the part of Dr. Stewart in cooperation with the St. Louis Board of Health that St. Louis is today one of the best vaccinated cities in this country and is therefore practically free from smallpox.

But Dr. Stewart's work in the division of hygiene extended into every phase of disease prevention which is succinctly set forth in a resolution adopted by the members of the division and presented to him at a dinner in his honor upon his retirement from the division.

In the appointment of Dr. Stewart we believe that Governor Baker has found a man who will administer the office with a broad comprehension of the best measures to promote the health and welfare of the people; who will compel obedience to the rules and regulations of the board by registrars and all others employed or controlled by the board; who will not countenance appointments of irregular or unworthy registrars; who will recognize the influence of the reputable medical profession in every county when the board has reason to undertake a health campaign in the

county. Already Dr. Stewart has cleared up a situation that has acutely disturbed the reputable physicians in one county for two years and we have his assurance that he will act with equal promptness in the future.

The resolutions adopted by the School Hygiene Division follow:

Whereas, It has been formally announced to the school hygiene division of the St. Louis public schools that their respected director, Dr. James Stewart, has been honored by his appointment at the hands of His Excellency, the Governor, to fill the position of state health commissioner of Missouri; and realizing that this appointment involves the severance of his relations with the division after January 31, 1925, the members of the School Hygiene Division do express their sentiments in the following resolutions:

Resolved, That the division extend its compliments to Dr. Stewart in his new position, feeling that his ability and personality will have a wider field of activity and appreciation in the position of chief health officer of a sovereign state; be it further

Resolved, That the members of the division express their recognition of the fact that the present efficiency of their organization is due to the activity and foresight of Dr. Stewart while acting as its official head. Also of the fact that the people of St. Louis and their public schools are indebted to the diligence and enthusiasm of Dr. Stewart in furthering such valuable adjuncts to the physical improvement of the children as the establishing of special schools for individual instruction; the cooperation with the St. Louis Tuberculosis Society in the conducting of open air schools for malnourished children; the school for crippled children who cannot attend the ordinary schools; the free dental clinics for indigent children; the organization of sight conservation classes for children who are semi-blind; the school now under construction for handicapped colored children; his vigilance and cooperation with the health department in the control of communicable disease by thorough vaccination and sanitary precautions through the school system; the toxin-antitoxin campaign. Throughout these activities he has earned the appreciation and good will of superintendents, principals, teachers and social agencies whose cooperation was necessary for the success of these enterprises; and be it further

Resolved, That these resolutions of appreciation be presented for his hearing at a farewell dinner given in his honor by the School Hygiene Division at Hotel Statler, the evening of January 28, 1925; and be it further

Resolved, That the sentiment of the division be further expressed in a complimentary token that may serve Dr. Stewart as a reminder of the occasion and as an emblem of the good will and best wishes of the body of men and women who have found it a pleasant privilege to have served under his able and kindly direction.

NEWS NOTES

Dr. T. A. Son, of Bonne Terre, and Dr. E. E. Brunner, of Marshall, members of the state board of health, have tendered their resignations and Governor Baker has appointed Dr.

Homer L. Kerr, of Crane, and Dr. Herman S. Gove, of Linn, to fill the vacancies.

The supreme court of Missouri has upheld the St. Louis ordinance which gives the city the right to sell impounded dogs not claimed by their owners to the reputable medical schools of the city for scientific purposes. The Humane Society of St. Louis had brought suit to restrain the city from enforcing the ordinance but this restraining order was denied by the circuit court and the case was appealed to the supreme court by the Humane Society.

The next meeting for examinations for license to practice medicine in Missouri will be held by the state board of health at St. Louis on June 23, 24, 25 and 26.

All applicants are required to have their applications on file with the state board of health thirty days prior to the holding of this examination if they expect to obtain permission to take the examination. Address Dr. James Stewart, Secretary, Missouri State Board of Health, Jefferson City.

The American Board of Otolaryngology will hold its first examination during the meeting of the American Medical Association in Atlantic City, May 25 to 28. According to the rules of the Board, applicants are divided into three classes.

Class I. Those who have practiced otolaryngology ten years or more.

Class II. Those who have practiced otolaryngology five years and less than ten years.

Class III. Those who have practiced otolaryngology less than five years.

The type of examination is different for each class.

The Secretary, Dr. H. W. Loeb, St. Louis, announces that thus far over three hundred applications have been made.

The following articles have been accepted for New and Nonofficial Remedies:

Mulford, H. K., Tuberculin Intracutaneous (Human Type)—Mulford.

Parke, Davis & Co., Mercurosal Ampoules. E. R. Squibb & Sons, Squibb's Liquid Petrolatum with Agar.

The Missouri Building, the new structure situated in the heart of the medical center of St. Louis, Grand Boulevard and Lucas Avenue, and the new headquarters of the State Medical Association, which is devoted entirely to members of the reputable medical and dental professions, is rapidly filling up, a large number of physicians and dentists having moved their offices to the building. Those

who have taken space in the building are: Missouri State Medical Association, Drs. S. F. Abrams, J. P. Berman, O. I. Bird, Ben M. Bull, L. S. Chaudet, R. H. Davis, W. D. Davis, A. H. Deppe, A. H. Diehr, E. K. Dixon, C. H. Eyerman, J. A. Farrel, G. W. Flynn, Alfred Goldman, R. B. H. Gradwohl, H. F. Hageman, F. K. Hansel, J. F. Hardesty, L. L. Heid, G. W. Henske, P. J. Heuer, Scott Heuer, A. E. Horwitz, V. E. Hrdlicka, R. L. Johnson, I. D. Kelley, P. F. Kistner, A. W. Koessel, J. C. Kopelowitz, M. F. Kouri, M. E. McGrath, Clarence Martin, E. V. Mastin, J. C. Morfit, E. J. Neville, B. O. Owens, J. C. Peden, A. W. Peters, C. C. Presnell, M. J. Press, L. E. Printy, E. C. Reisse, H. W. Rice, U. C. Ruckstuhl, Harry Sandperl, R. C. Sauerbrunn, E. C. Schisler, M. G. Seelig, A. R. Shreffler, W. M. Smit, G. V. Stryker, J. L. Tierney, R. S. Tilles, J. R. Vaughan, H. W. Welch, A. A. Werner, L. A. Will, J. W. Williamson, G. W. Wilson.

OBITUARY

WILLIAM T. BOHANNON, M.D.

At a meeting of the Vernon County Medical Society held March 12, 1925, the following memorial on Dr. William T. Bohannon was adopted:

Again we are called upon to chronicle and mourn the loss of one of our members, Dr. William T. Bohannon, of Nevada, who died on February 14, 1925, at midday when the sun was at its zenith.

Dr. William T. Bohannon was the oldest of our members in the point of years. He was born in Barren county, Kentucky, December 7, 1842. He was the son of a Baptist preacher who died when the Doctor was only two years of age, and he was the youngest of eight children left in almost destitute circumstances; but the mother managed to keep the family together on the farm while the Doctor acquired his preliminary education at the rural schools of the day.

When the Civil War began Dr. Bohannon enlisted in the 21st Kentucky Infantry, served four years in the Union Army and was engaged in the battles of Stone River, Resaca, Dallas, Kennesaw Mountain, Mission Ridge, Lovejoy Station, Jonesboro and numerous skirmishes every day and was not out of range of the adversary from May 7, to the following September of 1864. He was present at the battle of Lookout Mountain and the Battle above the Clouds, the battle of which poets sing and romance loves to picture and declaim.

After the Civil War the Doctor studied medi-

cine and graduated at Louisville, Kentucky, in 1871, and attended the New York Polyclinic in 1890. He practiced seven years in Kentucky, seventeen years in Harrison county, Missouri, and twenty-seven years in Nevada, Missouri.

He leaves to cherish his memory his devoted wife, two children, one grandson and one great-granddaughter; also one sister. Dr. Bohannon has a host of friends; he was well liked and esteemed by all who knew him. He was a conscientious and faithful physician, well read in his profession and the literature of the day. He was beyond question an ethical practitioner. He loved to meet with his friends and attend the meetings of this Society. He was faithful, believed in the principles of the Hippocratic Oath and on all occasions "stood four square to all winds that blow." Therefore be it

Resolved, That, we in our Society assembled on this twelfth day of March, 1925, hereby express and tender our sympathy to his family in the loss of their loved one, and instruct our secretary to forward a copy of these proceedings to the family and request that the same be published in our daily and weekly papers and also in *The Journal of the Missouri State Medical Association*.

His life was gentle and unassuming and his passing reminds us that

"The thoughts we are thinking, our fathers would think.

From the death we are shrinking, our fathers would shrink.

To the life we are clinging, they also would cling. But it speeds for us all like a bird on the wing."

E. A. DULIN, M.D., Necrologist.

HENRY LEACH REID, M.D.

Dr. H. L. Reid, of Charleston, a graduate of the University of Louisville, 1890, prominent physician in Southeast Missouri, died February 5, 1925, of cerebral hemorrhage. He was 59 years old.

While Dr. Reid's health had been failing for several years his condition had not been considered serious and therefore his death following a sudden collapse while seated in his office was wholly unexpected. Attending physicians had him removed to his home but he never regained consciousness and died within a few hours.

Dr. Reid was one of the most prominent physicians in Southeast Missouri and had held many important offices in the medical societies of his community and the State Association, having been president of the Southeast Missouri Medical Association, Councilor for the 22d District of the Missouri State Medical Association since 1919, delegate to the American

Medical Association from 1912 to 1918 and two weeks previous to his death had been elected secretary of the Charleston County Medical Society.

Born in Jefferson county, Kentucky, Dr. Reid obtained his early education in the public schools there and after receiving his medical degree practiced for a short time at Barralton, Kentucky, leaving there in 1892 to locate at Charleston, Missouri. He was married in 1894 to Miss Sue Byrd, of Charleston, who survives him. His gracious personality and efficient services rendered in such a kindly and interested fashion endeared him to many to whom his passing is a personal loss. The sterling qualities of his character caused him to be sought for leadership in civic as well as professional affairs and he gave of himself freely to the betterment of his community. At the time of his death he was president of the local board of education, a trustee in the Methodist church and a director in the Charleston Bank and Savings Institution.

AMOS A. FREYMAN, M.D.

Dr. Amos F. Freyman, of Kansas City, a graduate of the Cincinnati College of Medicine and Surgery, 1874, died at St. Joseph's Hospital January 15, 1925, at the age of 72 years.

Dr. Freyman was born in Homerville, Ohio, August 24, 1852. He taught school in Fremont, serving as principal of the public schools when only 19 years old. He began his medical practice in Fremont but left there in 1877 to enter into partnership with his brother, Jokshan Freyman, in Hermann, Mo. About forty years ago the brothers removed to Kansas City and Dr. Amos Freyman became a charter member of Jackson County Medical Society serving as president of that body in 1900. For many years he was professor of hygiene and preventive medicine in the old University Medical College at Kansas City. He gained the reputation of being one of Kansas City's most brilliant physicians and many of the young physicians sought his advice and counsel. His brother, Jokshan, died in 1920.

Dr. Freyman was the victim of two attacks by bandits within the last year and a half and it was believed that the shock of these attacks led to his breakdown finally resulting in pneumonia from which he died.

CARUTHERS A. ANTHONY, M.D.

Dr. C. A. Anthony, of Fredericktown, a graduate of Missouri Medical College, St. Louis (now Washington University School of Medicine), 1882, died of heart trouble March 1, 1925, aged 66 years.

Dr. Anthony had been a resident of Fredericktown all his life and practiced there for forty-two years. He had always taken an active interest in civic as well as professional affairs, serving as a member of the Fredericktown School Board for twelve years, and local surgeon for the Missouri Pacific Railroad for sixteen years. His interest in the activities of Madison County Medical Society soon won the respect and admiration of his colleagues who elected him treasurer and delegate to the State Association in 1920; in 1922 he was elected vice-president and in 1924 was made president of his county medical society.

ROBERT HENRY CONAWAY, M.D.

Dr. Robert H. Conaway, of Stone Hill, died at the home of his daughter in Dillard, Mo., February 7, 1925, aged 72 years.

Dr. Conaway was a native of Kentucky. He was married March 5, 1871, to Miss Sarah T. Short, who survives him. He is also survived by his father, four sons and four daughters. He was a member of Dent County Medical Society for a number of years. His activity in the affairs of the society soon won the recognition of his fellow members and in 1923 he was elected president of the society. For a number of years he served as a member of the U. S. Pension Board.

CHARLES A. P. DUNNAVANT, M.D.

Dr. Charles A. P. Dunnavant, of Kirkwood, a graduate of St. Louis Medical College (now Washington University School of Medicine), 1882, died January 30, 1925, aged 69 years. Shortly after graduating from medical school he located at Kirkwood and was one of the charter members of St. Louis County Medical Society serving as president of that organization in 1924.

CORRESPONDENCE

RUSSIAN INFORMATION BUREAU IN WASHINGTON

Washington, D. C., March 6, 1925.

To The Editor:

We wish to call your attention to the enclosed circular of the Russian Information Bureau in Washington which is acting as representative of the Joint Information Bureau in Moscow in its endeavors to bring about closer contact between scientists as well as scientific and cultural organizations of the Soviet Union and the other countries.

The importance of the establishment of such a contact cannot be too much emphasized, and we believe that you will render a great service to the advancement of international scientific and cultural relations by printing the inclosed circular in your publication thus bringing it to the attention of the interested persons and institutions.

B. E. SKVIRSKY.

The circular follows:

Washington, D. C., February, 1925.

The lack of continuous contact between scientists, scientific institutions and cultural organizations of the United States and the Union of Soviet Republics has been felt for many years in both countries.

Since the war there has been practically no mutual exchange of scientific publications—with the result that the institutions and organizations concerned were unable to form any comprehensive idea of the mutual activities and achievements.

A similar situation prevailed not so very long ago in the cultural relations between the Soviet Union and most European countries.

Due to this unsatisfactory condition a special organization was brought to life—the Joint Information Bureau which has been created in Moscow with the aim of assisting in the establishment of closer cultural connections between the Union of Soviet Republics and other countries.

The Joint Information Bureau in Moscow is in constant communication with most of the scientific and cultural establishments and institutions of the Soviet Union and is in a position to facilitate regular contact as well as an exchange of scientific periodical and non-periodical publications between the interested institutions, groups and individuals of the Soviet Union and the other countries. Personal exchange of their works between scientists engaged in similar research activities could also be arranged as well as the publication of unpublished manuscripts and articles in the general periodical and special press.

At the request of the Joint Information Bureau in Moscow the Russian Information Bureau in Washington has undertaken to represent the Moscow Bureau in its endeavors which will no doubt be in the mutual interest of both countries.

The interested institutions, organizations and individuals may apply to the Russian Information Bureau in Washington, D. C.

Russian Information Bureau.

Address of the Russian Information Bureau:
2819 Connecticut Avenue, N. W.
Washington, D. C.

BOOKS FOR LEISURE MOMENTS

To the person who hates to read biography because "one has to wade through the birth of the hero" in the first chapter it is safe to recommend "William Crawford Gorgas, Conqueror of Yellow Fever." (Lea and Febiger, Philadelphia.) In the first chapter Dr. Gorgas is married and in the second chapter he is born. To the person who is a stickler for sequence this is unpardonable, but it is good salesmanship for the romance as told by Marie D. Gorgas in the first chapter holds your interest and you read the book. Mrs. Gorgas tells the story to show how inextricably the life of Dr. Gorgas was bound up with yellow fever. As a young doctor his first patients were yellow fever patients, he became ill with yellow fever while an army doctor, he met his wife when she was stricken with yellow fever, and it was through his fight on yellow fever that we today honor the name of William Crawford Gorgas.

It was in the city of Havana that Dr. Gorgas began his first real fight on "Yellow Jack." It seemed that though yellow fever had raged for years and years and we find in Dr. Rush's notes that "moschetoes" were plentiful about Philadelphia in 1793 when the yellow fever broke out there—no one seemed to associate mosquitoes with yellow fever until the Reed Board consisting of Walter Reed, Aristides Agramonte, Jesse Lazear and James Carroll became convinced that the disease was being carried by the *Stegomyia* mosquito. Carlos J. Finlay had written many documents on the mosquito and yellow fever, but did not have the persuaviness necessary to convince anyone that his theory was right. Walter Reed believed the mosquito carried yellow fever germs, but did not see the way clear to destroy the mosquito—that is where Dr. Gorgas came in. He destroyed the mosquito by destroying the breeding place of the *Stegomyia*.

Dr. Gorgas was a firm believer in persistence for without it he would never have conquered yellow fever in the face of the many difficulties. In Havana his difficulties were mostly in getting the natives to cooperate, but when he was sent to the Canal Zone his difficulties were largely official. Admiral John Walker pocketed most of his requisitions and at one time when the Doctor saw fit to send a cable to Washington, his reply was that he should write letters instead of cabling—it was less expensive.

Theodore Shonts asked for his removal, because he did not believe the zone was cleaned up. Gorgas had found by experience that to spend money on cleaning up and still leave the

breeding places would not obliterate yellow fever. He preferred to rid the place of the *Stegomyia* by careful and watchful inspection and then clean up. A dead horse lying in the street was not half as dangerous as the *Stegomyia* breeding in a rain barrel. It was for this that he employed inspectors to watch the rain barrels and other places where water was kept. His energies were tireless and in the face of the many difficulties he won out. An illustration of the difficulties and red tape Gorgas had to put up with is told by Dr. Charles A. L. Reed, of Cincinnati:

"An instance in point occurred a few days before my departure from Ancon: A woman in the insane department was delivered of a child; her condition was such that she could not nurse her offspring; the nurse applied to Major La Garde for a rubber nipple and nursing bottle; he had none—the requisition of last September had not yet been filled; he made out a requisition, took it to Colonel Gorgas for indorsement, then to Mr. Tobey, chief of the bureau of materials and supplies, for another indorsement, then to a clerk to have it copied and engrossed; then a messenger was permitted to go to a drug store and buy a nursing bottle and nipple which finally reached the infant two days after the necessity for their use had arisen. The articles ought to have cost not more than thirty cents, but counting the money value of the time of the nurse, of Major La Garde, of his clerical help, of Colonel Gorgas, of Mr. Tobey, of Mr. Tobey's clerks, of the messenger, the cost to the Government of the United States was in the neighborhood of \$6.75—all due to the penny-wise-and-pound-foolish policy of the Commission."

After his victory in the Canal Zone he was sent to South Africa to see what could be done to eliminate pneumonia. While there he was raised to the rank of major general by congress and later President Wilson made him Surgeon-General. He displayed the same persistence and the same courage during the World War as he had done in the Canal Zone, and here his path was not always easy. After the war he was retired from active service in the army.

England then claimed him for work on the western coast of Africa. He had eliminated the disease from all of North America and practically all of South America and he entered with zest on his next mission—a mission that was never to be fulfilled. While in London he was stricken with paralysis and after a lingering illness died. England honored him by allowing the funeral service to take place in St. Paul's with all official England represented. A fitting tribute to America that a once bare-foot boy with an ambition could lie in state in the same place with Nelson and Wellington—a fitting tribute to a country that could produce

such a son—a tribute to a great man who had made possible the Panama Canal.

The combination of Marie D. Gorgas and Burton J. Hendrick is ideal. She writes the first and last chapter and he the other nine. She knew so well this man, his ambitions, his trials and his life and as a biographer the reputation of Mr. Hendrick is unquestioned.

The book holds your interest both from the wealth of information it contains and the story of a man whose service to humanity caused colleges to confer upon him honorary degrees; King Albert of Belgium to bestow upon him the Harbin Gold Medal, King George V. to decorate him with the order of St. Michael and St. George, and we of his country to place him on the honor roll of our greatest men.

A special edition of this interesting work has been put out by the publishers which is dedicated to the medical profession. P. B.

In "The Law of the Threshold," Flora Annie Steel gives a vivid picture of modern India, its superstitions, blood lust and other inherited tendencies. Through the mysticism of the Tantra cult, agents working for the establishment of Bolshevism weave a plot which entangles the heroine, a cultured Indian girl, and her lover.

The curious apathy as regards death which, according to the author, exists in India, makes possible a lurid, spectacular and exciting tale which would be meat to movie producers, should this story reach them.

Men of the medical profession may cast a skeptical glance, however, on the magical salves used to work miracles of healing on the hero, who had been previously treated by a thoroughgoing American physician. "Love philtres" also were used which made him forget conveniently just the hours necessary for his future happiness.

One point, however, the author stresses with considerable force as regards India: "In an old civilization like this in India there is such a confounded amount of dregs down below that the less they are disturbed the better." And again: "For as heterogeneous as India may be in race, language, customs, it is yet homogeneous in this—that any agitation, any unrest, any sedition may tap scores of unseen, scarcely formulated grievances or aspirations." Bolshevism in effect there must necessarily prove disastrous to India's people.

India's mysticism and unsolved riddles form the greatest features of the story and Flora Annie Steel believes that today, as always, the "human sacrifice" and "ritual of the dead" still exist. E. S. T.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, FOR 1925

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID THE STATE ASSESSMENT FOR ALL
THEIR MEMBERS)

Benton County Medical Society, October 10, 1924.

Chariton County Medical Society, December 20, 1924.

Camden County Medical Society, December 29, 1924.

Madison County Medical Society, January 21, 1925.

Montgomery County Medical Society, January 22, 1925.

Clark County Medical Society, January 30, 1925.

Cape Girardeau County Medical Society, February 10, 1925.

Dent County Medical Society, February 19, 1925.

Webster County Medical Society, February 26, 1925.

MISSOURI STATE MEDICAL ASSOCIATION 68TH ANNUAL SESSION

Baltimore Hotel

Kansas City, May 5, 6, 7, 1925

PRELIMINARY PROGRAM

Clinics at Kansas City General Hospital on the morning of each day. Scientific papers to be read in the afternoons.

Symposium on Diseases of the Upper Abdomen:
A. E. Hertzler, Kansas City: Surgical Conditions of Gastric Origin.

E. Lee Miller, Kansas City: Surgical Conditions of Pancreatic Origin.

Robert Irland, Kansas City: Surgical Conditions of Hepatic Origin.

J. Q. Chambers, Kansas City: Intrathoracic Lesions Simulating Abdominal Conditions.

Symposium on Goiter:

H. S. McKay, St. Louis: Surgical.

Ellis Fischel, St. Louis: Surgical.

C. H. Neilson, St. Louis: Medical.

George E. Wilson, St. Louis: Medical.

Ralph L. Thompson, St. Louis: Pathology of Thyroid Hyperplasia.

Sherwood Moore, St. Louis: X-ray and Radium. of Eclampsia.

W. A. German, Kansas City: Changes in the Lee Dorset, St. Louis: Conservative Treatment Chest Wall in Tuberculosis.

Warren Rainey, St. Louis: Steinman Pin Traction in Fracture of Leg.

Otto Schwarz and Wm. J. Dieckman, St. Louis: Puerperal Infection.

A. L. Skogg, Kansas City: Tryparsamid Therapy in Neurosyphilis. Report of a Case.

E. C. White, Kansas City: The Management of the Nausea and Vomiting of Pregnancy.

R. A. Woolsey, St. Louis: Inguinal Hernia.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

One Hundred and Ninth Meeting, January 12, 1925.

1. MYELOID MYELOMATA.—By DR. SHERWOOD MOORE.

Four bone conditions with distinctive findings are described, differing in various respects from one another and from other diseases involving bone. These distinctions lie in the blood picture, in the histological findings and in the radiological findings.

For the first time the X-ray bone changes found in chloroma of the myeloid type, or a myelocytoma, are described. A unique X-ray picture is claimed for this type.

These four cases are presented to establish the idea that there are four malignant tumors of the blood-forming organs distinct from the leukemias and from the other malignant diseases involving bone, and that they are not sarcomatous, but of hematogenous origin.

DISCUSSION

DR. MCJUNKIN: Having seen these cases at autopsy myself, I would like to say a word about their characteristic microscopic features. This case of myeloid leukemia is unusual in that there are in the bone and on the surface of the bone, growths that have the characteristics of the usual tumor growth. In this particular case the diagnosis of the tumor masses in the bones and on the surface of the bones seems to be incontestable since 50 per cent of the cells consists of myelocytes, chiefly neutrophilic and eosinophilic; the other 50 per cent corresponds in size and shape to myeloblasts. The microscopic diagnosis in this case was quite simple and definite. In some of the cases that have been reported the diagnosis is less definite, and the greatest difference seems to be that the growths are more rapid and the differentiation of cells less marked. These more rapidly growing tumors show very few differentiated cells. The oxidase reaction aids in the identification of cells with neutrophilic and eosinophilic granulations but it does not bring out a granulation in the myeloblasts and for that reason it does not help very much.

In regard to the identification of the myeloblast, that is the stem cell of its class, I would like to mention that Dr. Florence Sabin and her fellow-workers in the November, 1924, number of the *Journal of Experimental Medicine* state that myeloblasts are characterized by a very large number of mitochondria, unusually large cells, and they use supercyto stain to bring out these cells. Although they employ the supravital method of staining, no doubt other stains are applicable in fixed tissue. So this would seem to be a very hopeful method of identifying the myeloblastic cell before there is any formation of specific granules in the cell.

Now I would like to say just a brief word in regard to the plasma cell type of myeloma that came to autopsy. To my mind the diagnosis was rather uncertain. These areas of lymphocytic infiltration in the bone are unquestionably lymphocytes together with a considerable number of plasma cells of the type that commonly exist in chronic inflammation. So far as I am concerned I am not at all sure that this case might not be, from a pathological standpoint, some sort of an inflammatory process. The cell proliferation foci is very slight in these in the bones.

DR. SHERWOOD MOORE: Just one point I forgot to mention and that is that we have had in the

records of the Hospital 105 cases of leukemia of all types and in that number we have never found anything similar to the leukemic involvement in bone such as shown in this 4th case. This led me to believe that it is so unique that it must be a definite disease entity apart from the ordinary leukemia. It was not to that case I referred; rather to those cases in which a tumor of some sort had ruptured into a vessel, produced a leukemia picture, and accounted for the myeloma. It seems strange that in leukemia you would not find what ordinarily is bound to occur at some time, but apparently it was not so in this case. Although we have never particularly looked at it from that standpoint, it is a common symptom in leukemics to complain of an ache in the bone. We have X-rayed all such cases but have never found any bone involvement.

2. COMPENSATORY HYPERTROPHY AND HYPERPLASIA IN ISLANDS OF LANGERHANS IN PANCREAS OF CHILD BORN OF DIABETIC MOTHER.—DRS. L. C. FEEMSTER AND S. H. GRAY.

Two cases have been reported in the literature of infants of diabetic mothers which showed somewhat similar findings to the case we report, in that the pancreas showed large hyperplastic islands. The case we are reporting was at the time of delivery apparently a normal infant and the delivery was very easy. The mother was known to have had diabetes for 15 years and for quite a while had been a total diabetic. Her blood sugar was high on admission although her carbohydrate utilization showed a definite gain during the last two months of pregnancy. The baby died on the 4th day of life somewhat suddenly, although it had been taking its feedings very poorly, and had a slight fever during the last day. The baby's blood sugar on the 3rd day was .062.

At autopsy the chief findings were in the microscopic examination of the pancreas and adrenal. The islands of Langerhans were very numerous and large, being three times as numerous and eight times as large as the average in a number of normal infants and giving therefore twenty-four times as much insular tissue. The adrenal showed a pronounced hypertrophy of cells in the medulla.

We considered the hypertrophy and hyperplasia to be a compensatory mechanism to assist in utilizing the increased blood sugar. The hypertrophy of the adrenal cells might be due to the fact that they are antagonistic to insular tissue. The death of the child might have been due to a hypoglycemia. The fact that these three cases do show somewhat similar findings makes us feel that compensatory hypertrophy and hyperplasia in these cases is an occurrence of general significance.

DISCUSSION

DR. W. H. OLMSTED: The general theory of insulin secretion is that hyperglycemia causes an outflow of insulin from the pancreas. The mother of this child came under observation at five months and then not again until shortly before delivery. We have reason to believe that in early pregnancy there was marked hyperglycemia. This probably passed into the circulation, as Dr. Gray stated. After birth the number of islands does not increase in number so that the great increase in number and size of islands must have begun very early in embryonic life. If the mother had been aborted at five months I feel sure that the same picture in the pancreas would have been found. The hyperglycemia of the mother may have been the stimulating factor to produce the island hyperplasia in the infant.

It is of great interest to determine whether the infant's insulin got into the circulation of the mother. During the last month of pregnancy the mother showed a steady decrease in the amount of insulin that she required. When she came in she needed the usual amount for her degree of diabetes but during the last month we were able to cut down the insulin dose until it was one-third of what she had required at entrance. Insulin, according to all our principles of today, is a protein and has a molecular weight of several thousands. Proteins do not pass through the permeable membranes. From the microscopic picture of the infant's pancreas one would think that the enormous amounts of insulin would be reduced if all the islands seen were actively secreting. It is strange that the mother's diabetic condition did not improve a great deal more unless very little or a very small amount of insulin found its way from infant to mother.

The other thing that to me seems of most importance is the suggestion made by Dr. Gray that the infant's death might have been due to hypoglycemia. I frankly admit that it did not occur to me that this infant should have had sugar administered but if we ever have another such case we would be very negligent if we did not investigate the blood sugar frequently to see if the infant was receiving enough sugar. It is quite probable that hypoglycemia was a very important factor in the infant's death.

DR. LOEB: There are several points which interest me in addition to what Dr. Olmsted said. In the first place in the case of the French investigators mentioned by Drs. Gray and Feemster there was an increase in the size but not in the number of the islands, and this may be due to the fact that in their case glycosuria in the mother occurred at a very late stage of pregnancy, namely in the eighth month. The younger the fetus the greater the likelihood that in addition to the increase in size a new formation of the islands will take place. The lack of new formation in their case may be due to the advanced stage of development of the pregnancy at which an increasing amount of sugar began to circulate in the blood of the fetus. We know that in early stages of development there is a great tendency of the islands to increase in number in certain conditions. Thus, in congenital syphilis in which a great destruction of tissue takes place, compensatory hypertrophy may occur in the islands.

The second point of interest concerns the cause of compensatory hypertrophy. We know that if we extirpate, for instance, a great part of the thyroid gland or a testicle, the remaining thyroid or testicle hypertrophies but as to the cause of this hypertrophy in general we are in ignorance; only in the case of the thyroid we know that the stimulus is of a chemical nature. Thus, if we administer thyroid or pituitary extract we can prevent hypertrophy of the thyroid. As to the other glands we have no knowledge of the cause of the hypertrophy. The observations which Drs. Gray and Feemster have reported seem to prove that in the case of the compensatory hypertrophy of the islands, it is an increase of the sugar in the circulation of the fetus, which is responsible for the hypertrophy. We may thus add the islands of Langerhans to those organs which are chemically stimulated by hypertrophy.

3. ILEOCECAL TUBERCULOSIS. — By DRS. J. W. LARIMORE, A. O. FISHER AND I. Y. OLCH.

Primary tuberculosis of the intestine is comparatively rare in this country. Tuberculosis of the intestines, secondary to pulmonary tuberculosis is almost as frequent as is the fatal termination of pulmonary tuberculosis. Intestinal tuberculosis is

seen in from 60 per cent to 90 per cent of cases at termination according to various autopsy reports. The intestinal involvement centers at the ileocecal region. Schwatt, in a very careful study of autopsied cases of pulmonary tuberculosis states that the onset of secondary intestinal tuberculosis ushers in the termination of the case in from three to six months. He also states that 50 per cent of secondary intestinal tuberculosis is silent.

The relation of the intestinal complications as a determining cause to the fatal termination is problematic. It is certain that it occurs as a terminal incident in otherwise fatal pulmonary tuberculosis. It is also apparent that it occurs as a determining fatal complication in cases which are retrogressive as regards the pulmonary disease. In these cases it operates, first by superimposing an overload on the immunity and thus exhausting the resistance of the patient, and secondly, by creating localized mechanical and reflex functional gastrointestinal derangements which impair nutrition. It is for the relief of these two factors that surgery is considered.

The principal sign of ileocecal tuberculosis is the intolerance of the cecum to any content which makes it non-retentive of barium. In the late cases with extensive ulceration this is readily demonstrated by any fed test or by barium enema, and has been the classical sign of ileocecal tuberculosis, as independently observed by Pirie and by Stierlin, whose name it bears. It is an earlier phase of this sign which was demonstrated in our ulcerative cases by fluoroscopic observation and palpation. The irritability of the cecum at this very early stage, when its intolerance of barium is not so constant and absolute, can be demonstrated with fluoroscopic palpation. Palpation in these cases will, if the cecum contains any barium, cause the cecum and the ascending colon to promptly empty distally. I have several times by palpation secured peristalsis in the terminal ileum resulting in its clearance into the empty and relaxed cecum, which then, with the ascending colon contracts and propels the barium mass distally. It then remains in spasm, and further peristalsis of the ileum cannot be elicited. In addition to this demonstration in these three cases of early ileocecal involvement there was a lack of any X-ray evidence of other intestinal involvement, which would have been a contra-indication to surgery. In these cases the clinical diagnosis was in doubt and I feel that when intestinal involvement has become clinically certain the pathology has probably advanced beyond surgical help.

In studying subjects of pulmonary tuberculosis for intestinal involvement I feel that careful selection of cases must be made. The fact that so great a percentage of such subjects coming to autopsy show intestinal involvement does not indicate routine X-ray examination. It is probable that the fifty per cent of clinical "silent" cases are terminal incidents and result from the fatal status of the patient rather than in any way determining that status.

Clinical records and X-ray studies of five cases represented showing the method of demonstrating early ileocecal tuberculosis, the feasibility of operating on advanced pulmonary cases and the excellent clinical results from a gastro-intestinal standpoint of the surgical removal of the gastro-intestinal involvement.

DISCUSSION

DR. SINGER: Dr. Larimore opened the paper by stating that probably 80 to 90 per cent of pulmonary tuberculosis will eventually have metastatic infection in the bowel. Dr. Fisher said it was remarkable that it is a relatively rare occurrence. There is a reason for both of those statements. Dr. Opie

showed very clearly that intestinal tuberculosis is primary in certain countries, especially in Scotland and England, and lung tuberculosis secondary, while in this country we have a primary pulmonary tuberculosis and only secondary involvement of the intestines. Those of us who have studied these cases are struck with the large number of patients suffering with intestinal symptoms, and it has been shown by many cases in post-mortem records that the majority of tuberculosis patients have infections in the intestines. We have similar processes in the lung, an ulcerative process and a fibrotic type of lung lesion in which the patient has very little sputum, although suggestive shadows are shown in the X-ray plate. In the intestines we have a similar condition of ulceration and fibrosis—ulceration is the serious condition which in fibrotic tuberculous peritonitis is of less importance. In four cases only two showed ulceration. But the study of the situation has shown what can be done in a seemingly hopeless state of affairs. And it shows another thing—that it is possible to operate for tuberculosis of the bowel, with more or less certainty of recovery as far as operation is concerned. Very many doctors think it best not to operate on a tuberculous patient. If an operation is indicated, the presence of tuberculosis alone should not be considered too seriously. This paper has been well presented by Drs. Larimore, Fisher and Olch and is of considerable interest.

DR. HYMAN SPECTOR: We have tried everything at Koch Hospital from the therapeutic angle and two cases were treated with heliotherapy. We found that in both cases we had to stop the heliotherapy because the patients were getting worse. At Saranac Lake where they have been using heliotherapy they claim wonderful results probably because their cases were those of primary tuberculosis of the cecum while our cases were those of advanced pulmonary tuberculosis with secondary ileocecal tuberculosis. We also tried diet, particularly starvation diet at first and later eliminating coarse vegetables and giving the patients a milk diet, but they were not relieved. It is a problem in the institution which has to be solved because they complain more of the gastro-intestinal symptoms than of their lung conditions. If we could do something for their tuberculosis of the bowel there might be a chance to arrest their pulmonary condition.

As to cases for operation, before we sent this patient to Barnes Hospital for operation we felt that she would never return. The pulmonary symptoms were those of active disease and we felt pessimistic over the outcome; therefore, it was a pleasant surprise when she came back and since then there has been no complaint as far as the gastro-intestinal symptoms are concerned. We thought for some days that she was getting a recurrence but Dr. Larimore assured us to the contrary. This week the patient is not complaining at all. We asked her today how she was feeling and she said she had no abdominal symptoms to complain of. If we could only have some means of detecting early involvement of tuberculosis of the bowel we could save many more patients through operation in spite of the pulmonary manifestations.

DR. LARIMORE: These studies on tuberculosis were taken up as an effort to extend our observations of the small intestine. Because of the frequency of involvement of the small intestine we expected to find abundant material for X-ray study of the small intestinal ulcerative disease. We have no precedents in the diagnosis of tuberculosis of the small intestine. So far we have made little progress in determining and localizing involvement of the small intestine but we have discovered a means of determining very early involvement of the cecum.

I am grateful to Dr. Bredeck, to Dr. Spector and to the staff of Koch Hospital for their cooperation in studying this material. From it may develop a more extensive application to these cases in the effort to remove the disease rather than only to meet the mechanical crises of intestinal complications by means of surgical procedure.

MEDICAL SOCIETY OF ASSISTANT PHYSICIANS OF STATE HOSPITALS

The sixth meeting of the Medical Society of Assistant Physicians of Missouri State Hospitals was held at State Hospital No. 3, Nevada, February 11 and 12. The society was called to order by Dr. D. H. Young, president, at 9 a. m., and after an address of welcome by Dr. E. F. Hoctor, Superintendent, the minutes of the preceding meeting were read by Dr. Carroll in the absence of Dr. Bunch, the secretary. The regular business being transacted, the society proceeded to the election of officers for the ensuing year as this was the annual meeting and the first year of the society's existence.

By a unanimous vote, Dr. E. D. Carroll, of Hospital No. 2, was elected president and Dr. J. R. Bunch, of the same Institution, secretary.

The regular scientific program was then taken up and the members listened to a very interesting and technical, yet practical paper by Dr. Viola Barrett, of the Staff of Hospital No. 3 on "Blood and Urine Findings in Diabetes and Nephritis." This paper was of unusual merit and reflected much thought. It was very generally discussed and complimented.

The next paper was that of Dr. Davis, D.D.S., on "Dentistry in Hospitals." The doctor gave us many valuable ideas and statistical matter in relation to the subject as it concerns nervous and mental diseases. After discussion by all the members the society took a recess for luncheon and a very delightful one was served.

At 1 p. m. the society was again called to order and, Dr. A. H. Horn being ill, his paper on "Differential Blood Count and its Value to the General Practitioner in Infectious Diseases," was read for him by Dr. Bryan. This paper was interesting to all present and was thoroughly discussed after which Dr. M. B. Holmes read an interesting paper on the "Routine Urinalysis" which was both technical and practical. The paper was very generally discussed. Dr. D. L. Harris, of St. Louis, a pathologist of note, was present by invitation and took part in the discussions and also gave us an interesting talk on pathological subjects in general.

Dr. G. A. Johns, State Psychiatrist, was present and took part in the meeting, which we regard as particularly fortunate as his talks are always welcomed and of much profit to the members.

The society adjourned to meet at the Missouri Colony for the Feeble-minded and Epileptics at Marshall, Missouri.

CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society met in regular session at the Snapp Hotel in Excelsior Springs, Thursday evening, February 26. Twenty-seven members and wives were seated at the splendid dinner provided for the occasion. The fraternal spirit was evident throughout.

After dinner the usual routine business was attended to and a strong resolution was adopted, endorsing the amendments to the medical law now before the legislature, the secretary being instructed to notify our representatives of the fact.

Dr. J. H. Rothwell gave a forty-minute talk,

reminiscent as well as scientific in nature, on "Forty Years Experience in Obstetrics." The doctor portrayed many experiences, some of them most remarkable, from days long ago. His talk drew much discussion and many words of appreciation. Few men are better obstetricians than Dr. Rothwell, and few can speak with more authority on this important subject.

"What I Know About Influenza," the topic for general discussion, aroused many divergent opinions, from "Don't Know a Damn Thing About It" to "Failures I Have Encountered in Practice." Vaccines, pro and con, were handled without gloves. Nevertheless, the discussion was a profit-sharing venture, with dividends in the offing.

Our Ladies' Auxiliary? Well, Mr. Editor, I wish you would look up all the honied words that you ain't already got—all the poise, potency, sweetness, and scenery that you can think of, and say 'em about our Ladies' Auxiliary—praise 'em to the skies, mind you, and I'll sign it. It's the only way to do the subject justice!

J. J. GAINES, M.D., Secretary.

(If any editor can beat that we'd like to make his acquaintance. Ed.)

DUNKLIN COUNTY MEDICAL SOCIETY

The Dunklin County Medical Society met at Kennett on February 17, paid dues for 1925, and elected the following officers for the present year; J. D. Van Cleve, Malden, president, C. W. Brown, Kennett, vice-president; T. J. Rigdon, Kennett, secretary and treasurer; J. A. Hogue, Jr., Holcomb, delegate to State Association meeting; alternate delegate, W. L. Gossage; censor for three years, C. W. Brown.

T. J. RIGDON, M.D., Secretary.

HENRY COUNTY MEDICAL SOCIETY

The Henry County Medical Society met in the Y. M. C. A. Building, at Clinton, on Wednesday, December 17, 1924. The meeting was called to order by the president, Dr. J. H. Walton, at 2:00 p. m. Minutes of the previous meeting were read and approved. Members present were: Drs. J. H. Walton, R. J. Jennings, Wm. P. Bradley, T. A. Blackmore, F. M. Douglass, E. C. Peelor, J. R. Hampton, S. A. Poague and Wm. Kelly; also Dr. W. E. Baggerly, of LaDue, later to become a new member. The names of Drs. W. E. Baggerly, of LaDue, and D. A. Pollard, of Calhoun, were proposed and unanimously elected.

The election of officers was called for and resulted in the election of Dr. Robert D. Haire, of Clinton, president; Dr. Wm. Kelly, of Clinton, vice-president; Dr. E. C. Peelor, of Clinton, secretary-treasurer.

Considerable discussion was heard of cases occurring in the practice of those present.

The society then adjourned.

F. M. DOUGLASS, M.D., Reporter.

HOWELL-OREGON COUNTY MEDICAL SOCIETY

The Howell-Oregon County Medical Society met in regular session, February 26, in the Y. M. C. A. Building at Thayer, at 1:30 p. m. The members present were: Drs. A. H. Thornburgh; E. C. Bohrer and L. E. Toney, of West Plains; F. Gullic, of Koshkonong; J. M. Davis, of Thomasville; J. L. Eblen, of Alton; G. B. Forest, of Myrtle;

J. W. Lovan, of Hebron; and J. C. Culp, C. Rhea and F. A. Barnes, of Thayer.

Dr. Thornburgh called the meeting to order; Dr. Barnes, secretary. The minutes of the last meeting were read and approved.

Dr. Thornburgh read a very interesting and instructive paper on the thyroid gland, which was followed by a discussion by the members.

The application for membership of Dr. G. B. Forest, of Myrtle, was acted upon and he was accepted as a member.

The society adjourned to meet the last Thursday in March, at Alton.

F. A. BARNES, M.D., Secretary.

JASPER COUNTY MEDICAL SOCIETY

The Jasper County Society held its fifth meeting for the year 1925, Tuesday, February 10, at 8 o'clock p. m. at the Joplin Y. M. C. A. Members present: Drs. A. B. Clark, L. C. Chenoweth, J. A. Chenoweth, Clinton, Lowdermilk, S. H. Miller, McGaughey, Shelton, Post, Waggoner, Stormont, Barsen, Sims, Neff, LaForce Mack. The president, Dr. McGaughey, occupied the chair. In the absence of the secretary Dr. Sims acted as secretary.

Dr. J. A. Chenoweth reported a case of sciatica. Treatment consisted of injection of 5 cc. of 1 per cent quinine and urea hydrochloride in the sciatic nerve; immediate relief followed. Slight pain recurred at nights and on motion. A second injection was given sixteen days later. The patient is now perfectly comfortable. Case was discussed by Drs. Lowdermilk, Miller, and Chenoweth.

Dr. Miller reported a case in which there had been a gallbladder drainage some months previously and in which the patient at the present time had a R. B. C. of 1,990,000, hem. 35 per cent, W. B. C. 19,000. Exploratory laparotomy showed a small, soft gallbladder and small hard nodules on the posterior surface of the liver. Patient still having chills and temperature. No plasmodium.

Dr. Post reported a case of meningococcus infection relieved by serum.

Dr. Clinton reported a case in which no diagnosis has been made. The chief findings were a low blood pressure, hypertrophied heart, albumen, pulse of 52.

Dr. Neff reported a death from post-tonsillar abscess of four days duration.

The committee appointed to draw up resolutions of commendation for the Honorable Charles R. Warden thanking him for the support he is giving legislation regarding measures affecting the medical profession, submitted the following report which was adopted. Members of the committee were Dr. A. N. Gregg and L. C. Chenoweth. Dr. L. C. Chenoweth read the following resolutions:

WHEREAS: There is now pending in the Missouri legislature a bill prohibiting the prescribing of any alcoholic remedy by any physician in the state, and

WHEREAS: A portion of the medical profession believes that in certain diseases, alcoholic liquors are a necessary remedy, and

WHEREAS: The members of this society are of the opinion that the legislative body are incompetent to properly judge the merits of medical remedies, and

WHEREAS, The medical profession unreservedly condemns the promiscuous prescribing of alcoholic liquors and of narcotics by certain renegade persons licensed as doctors, thus bringing the odium of contempt on the medical profession, and

WHEREAS, There is now pending in the Missouri Legislature, House Bill No. 223 that provides that the State Board of Health be given power to

revoke the license of any and all doctors guilty of conduct deemed unprofessional, which includes the abuse of indiscriminate prescribing of alcohol and of narcotics, therefore be it

Resolved, That this society requests the various members of the legislature from this county to support House Bill No. 223 inasmuch as it is a better means of accomplishing the objects sought than is the bill which would wholly prevent the prescribing of any alcoholic liquors by any physician whatsoever, and be it further

Resolved, That a copy of this resolution be sent to each member of the legislature from this county.

On motion of L. C. Chenoweth and seconded by A. B. Clark the above resolution was adopted.

A communication from Dr. Goodwin asking for an endorsement of House Bill No. 223 was read. On motion of L. C. Chenoweth it was endorsed and the secretary was instructed to so write the representatives from this county.

A communication from H. S. Farrar, Federal narcotic agent of K. C., relative to a narcotic bill, which deals with the control of narcotics, was read. Dr. LaForce moved that the society give its endorsement of this proposed bill. Seconded by Dr. Stormont. Carried.

A motion was made and carried to send L. C. Chenoweth to Jefferson City to submit resolutions concerning alcohol and narcotics to the committee on criminal jurisprudence.

A communication from Dr. R. Claude Lowdermilk as appended to this report was read and on motion of Dr. Neff the Cherokee Society extended an invitation to participate in the meetings of the Jasper County Medical Society. This motion carried unanimously.

Meeting of February 17

The Jasper County Medical Society held its 6th meeting for the year 1925, Tuesday, February 17, at the Joplin Y. M. C. A., the president, Dr. McGaughey, in the chair. Members present: Drs. Powers, Iliff, Wilbur, Boswell, L. C. Chenoweth, Harutun, Reid, Brookhart, Weir, McKinney, Barson, Sims, Craig, Miller, Morgan, Snyder, Baxter, Chapman, Mack, Shelton, Clinton, LaForce, Leaming, Neff, Gaddie, J. A. Chenoweth, Coombs, McGaughey, Tyree, Lowdermilk, Barnett, Grantham, Duke, Thornton, A. B. Clark, J. W. Clark, Dickerson, Alberty, Stormont, and Waggoner, Marks, Jones.

Dr. W. W. Duke, of Kansas City, spoke on the diagnosis and treatment of the anemias. He emphasized the fact that anemia is a serious condition in its slightest manifestation. He outlined the different types of anemia with their respective symptoms and referred to the color of the palm of the hand as being of importance in making a diagnosis. Under the treatment of anemia, he spoke of the old routine methods in use and was very enthusiastic over the method of blood transfusion, he had devised, stating that in six hundred cases he had never had a fatality. He gave as the indications for a transfusion, hemorrhage; hemorrhagic diathesis; sepsis complicated by anemia; preparatory to operation; postpartum hemorrhage; extrauterine pregnancy; malignancy.

He stated that in anemia without atrophy and even with atrophy, at times, transfusions worked wonders, but that in cord lesions and in frequent recurring attacks they were not so useful.

James I. Tyree, M.D., Sec'y.

SCHUYLER COUNTY MEDICAL SOCIETY

The Schuyler County Medical Society met in

regular session at the office of Dr. J. B. Bridges, Downing, February 23, with the following present; Drs. A. J. Drake, J. H. Keller, H. E. Gerwig and J. B. Bridges. The meeting was called to order by Dr. A. J. Drake, president. The minutes of the last meeting were read and approved.

There were no papers read but a number of subjects were discussed and especially House Bill No. 223 and Senate Bill No. 83 now pending in our state legislature and the following resolutions were offered and adopted:

WHEREAS, This society deems House Bill No. 223 and Senate Bill No. 83 wise and good measures to protect the public health, therefore, be it

Resolved, That our secretary be instructed to write our representative and senator and urge them to support these bills and to use every effort to have them enacted into law.

The following officers were elected for the ensuing year: Dr. A. J. Drake, president; Dr. H. E. Gerwig, vice-president; Dr. J. B. Bridges, secretary-treasurer; Dr. O. P. Farrington, delegate to State meeting; Dr. H. E. Gerwig, alternate.

J. B. BRIDGES, M.D., Secretary.

ST. LOUIS COUNTY MEDICAL SOCIETY

The regular monthly meeting of the St. Louis County Medical Society was held January 14, at the Webster Groves Trust Company. Dr. Otto W. Koch, president, called the meeting to order. Those present were: Drs. F. P. Knabb, W. H. Townsend, J. A. Townsend, A. W. Westrup, C. P. Dyer, Otto W. Koch, Garnett Jones, Wm. F. O'Malley, John H. Sutter, Horine Miles, P. M. Brossard and Wm. F. Mitchell.

Dr. E. E. Tremain's application for membership was referred to the board of censors.

Dr. William H. Vogt, of St. Louis, read a well prepared paper on "Abnormal Separations of the Placenta," and showed several stereopticon views.

Meeting of February 11

The regular monthly meeting was held February 11, 1925, at the Webster Groves Trust Company. Dr. Otto W. Koch, president, called the meeting to order at 3 p. m. Those present were Drs. C. E. Barnett, L. W. Cape, Wm. F. O'Malley, John H. Armstrong, Clyde P. Dyer, Garnett Jones, Otto W. Koch, A. W. Westrup, Wm. F. Mitchell and Charles L. Davis.

Dr. E. E. Tremain, of Maplewood, was received into the society.

Dr. E. O. Breckenridge's application for membership was referred to the membership committee.

A resolution condemning House Bill No. 331, which would prevent the prescribing of liquor by physicians, was read and endorsed.

Dr. O'Malley was appointed representative on the Gorgas memorial movement.

Dr. Armstrong spoke of Dr. Charles A. P. Dunnavant, deceased, who was a charter member of our society, an active member to the time of his death, and a respected practitioner in Kirkwood since 1888.

House Bill No. 223 received the society's approval. Several members promised to write to the representatives of St. Louis County, telling them of our action.

Dr. T. Witsar White, of St. Louis, read a paper on "Abscess of the Deciduous Tooth," saying that some obscure fevers as well as an occasional case of endocarditis were due to this focus of infection.

W. F. MITCHELL, M.D., Secretary.

Meeting of March 11

The regular monthly meeting of the St. Louis County Medical Society was held in the director's room of the Webster Groves Trust Company, March 11. The meeting was called to order by the president, Dr. O. W. Koch, at 3 p. m. The following members were present: Drs. Koch, Knabb, O'Malley, Hanser, Schudde, Miles, Dyer, Jones, Kuhlmann, and Mitchell. The minutes of the preceding meeting were read and approved.

The resignation of the secretary, Dr. W. F. Mitchell, was read and accepted. Dr. O'Malley moved that a new secretary be elected at the next meeting. Carried. Dr. Dyer was appointed secretary pro tem.

Dr. Elmer O. Breckenridge was received into membership upon vote after a favorable report by the membership committee.

Dr. Fred J. Taussig, of St. Louis, read a paper on "Diseases of the Vulva of Importance to the General Practitioner." This was discussed by Drs. Kuhlmann, Hanser and Dyer.

C. P. DYER, M.D., Secretary.

BOOK REVIEWS

NEW VIEWS ON DIABETES MELLITUS. By P. J. Cammidge, M.D. and H. A. Howard, B.Sc. London: Henry Frowde and Hodder & Stroughton. 1923. 611p. (Oxford Medical Publications). American Branch, 35 W. 32 st. New York City. Price \$6.50.

This book comprises a lengthy discussion of recent literature on carbohydrate metabolism and much new experimental work by the authors on animals and patients which forms the basis for an analysis of the factors concerned in carbohydrate metabolism, and for the classification of a variety of different symptoms supposedly related to the disease diabetes mellitus. Although there are chapters on diagnosis and treatment, the book is a monographic exposition of the authors' theories rather than a clinical treatise.

The discussion of theories of carbohydrate metabolism is based primarily upon a consideration of the various factors which influence the concentration of sugar in the blood, and the "new views" appear to concern especially the increasing emphasis which the authors place upon influence of changes in the acid-base equilibria. Other factors which are considered at length are, the power of the liver to form and store glycogen, the influence of sodium chloride and other salts upon this power and upon the reverse process, the digestion of glycogen or glycogenolysis, the brake-like action of the pancreas and the influence of the pancreas and the influence of other glands upon glycogenolysis. Little or no consideration is given to the question of actual utilization of carbohydrate by oxidation, the whole discussion centering around blood sugar curves, the acid-base equilibria (as indicated by the theoretically sound but practically very questionable hemoglobin dissociation constant), "difference values" of blood and urine, etc. Besides presenting an interesting but uncritical discussion of recent literature and illustrative data from the authors' own experiments, the book has in the reviewer's opinion little merit and may do some harm. Some of the authors' experimental "facts" are contradictory to the results of other competent investigators, and others are not such as to inspire confidence. Some of the interpretations and the theories built upon them appear to the reviewer to be visionary and improbable. It

is impossible here to present detailed reasons for the unfavorable opinions above expressed, but the following may be cited: The authors claim that the hyperglycemia which follows the taking of food is due not as usually believed to the absorption of sugar from the intestine at a rate slightly exceeding the rate of its removal by the liver and other tissues, but to the disturbance of acid-base equilibria resulting from secretion of HCl in the gastric juice and alkali in bile and pancreatic juice, and their reabsorption. This idea is elaborated until eight of the fifteen type blood sugar curves shown in the frontispiece are attributed to acidosis, alkalosis, hypo and hyper chlorhydria etc. But the experimental result on which this theory is based, namely, that non-carbohydrate meals produce the same hyperglycemia as do carbohydrate meals, is contrary to the results of Foster (J. Biol. Chem. 1923) who tried unsuccessfully to confirm Cammidge's observations. Although the ingestion or injection of acid and alkali have long been known to influence the blood sugar, it is inconceivable that mere acid-base disturbance can be held responsible for diabetes. Although the mechanism of its action is still unknown, the fact that insulin supplies the diabetic deficiency would seem to rule out acid base disturbance as an important factor. Murlin followed the false trail of the influence of alkali upon carbohydrate metabolism and in so doing lost the trail followed by Banting to the discovery of insulin!

Similarly it may be admitted that although different inorganic salts affect cell permeability and when injected in sufficient amounts may produce hyperglycemia and glycosuria, and although different ions affect the activity of diastases and other enzymes, such knowledge, still very meagre and not well established, scarcely justifies the statements (p. 391) to the effect that "potassium as a base should be avoided as much as possible, and that those containing calcium, sodium and to a less extent magnesium are preferable." We are inclined to doubt also the evidence presented (p. 399) to indicate that hydrogen peroxide has a favorable effect upon diabetes; or that in vitro experiments with liver diastase and managanese, zinc, silver, copper, uranium and palladium salts indicate anything as to their therapeutic effect in diabetes or any other disease.

The complexity and profusion of the laboratory tests recommended, and the remarkable variety of the blood analyses recorded call for comment and perhaps for a word of warning. In research it is obvious that any method however costly in time, effort or money, is justified if it gives additional information. But even in research it may be questioned whether the more or less routine, complete analysis of the blood of diabetes for the inorganic as well as organic constituents is worth while. The making of unnecessary and pointless laboratory examinations is a fault which should be discouraged, not fostered. It is a common abuse. The reviewer questions the statement (p. 331) that "as complete an analysis of the urine as possible is desirable in all cases of glycosuria and diabetes." On page 320 a table gives the results of testing for individual amino acids in urine of ten cases of diabetes who "died suddenly from collapse." The presence or absence of thirteen different amino acids is recorded. In most cases these results are purely imaginary because reliable methods do not exist for the individual detection of most of these amino acids in urine.

The whole subject of carbohydrate metabolism is in a state of flux and until more is known of the factors concerned in sugar combustion it is impossible to judge the truth of the hypotheses presented in this book. It can be commended to those who desire to keep in touch with this growing and yet unsettled subject.—P. A. S.

BACTERIA IN RELATION TO MAN; A STUDY IN GENERAL MICROBIOLOGY. By Jean Broadhurst, Ph.D. Associate Professor of Biology, Teachers College, Columbia University. 147 illustrations. Philadelphia and London: J. B. Lippincott Company. (1925)

This modest volume, as the title suggests, is an outline of the manifold activities of microorganisms, and particularly bacteria, in relation to man. An introductory chapter on the microscope and an explanatory section on general biology leads to a consideration of bacteria. Many of the striking or important phases of bacterial technique are mentioned briefly, and this part is followed by short chapters in outline of the bacteriology of water, milk, air and soil, together with a brief mention of certain economic applications of bacteriology to the industries. The final chapter is an outline of some of the more conspicuous phases of microbic infection to man. A brief appendix enters into greater details of bacterial cultivation.

The illustrations are numerous and well selected. Figure 143 states that Reed contracted yellow fever in Camp Lazear. Major Reed does not appear to have contracted yellow fever.

The volume is, as the preface clearly states, an outline upon which the student can build. It is not obviously intended as a text. At the end of each chapter is a list of references, which are for the most part well chosen, authoritative articles bearing upon the text. There is an unavoidably long step between the simplicity of presentation of the text and the technical complexity of most of these references which would seem to require an undue background on the part of the student to fully enjoy them. This difficulty, however, is inherent in the subject matter available and not a fault of the volume itself.—A. G. K.

THE PRACTICAL MEDICINE SERIES. Comprising Eight Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Charles L. Mix, A.M., M.D. Volume 1. General Medicine. Series 1924. Chicago. The Year Book Publishing Company, 304 South Dearborn Street. Price \$3.00.

The book is essentially a volume of abstracts and excerpts from the current literature of the last year. It differs from the ordinary periodical abstracts only in that the editor has selected that which he thinks valuable from the mass of material appearing during the year. Whether the volume is of more value to the physician than good periodical abstracts would be, must depend on whether he is desirous of securing all the literature that has appeared on a given subject during the year or whether he wishes only that which seems of value to such men as those who have edited this volume. However, since these men are eminent in their fields, it is of considerable interest to notice what they consider valuable.—G. H. H.

DEVELOPMENTAL ANATOMY. Textbook and laboratory manual of embryology. By Leslie Brainerd Arey. Professor of Anatomy at the Northwestern University Medical School, Chicago. Philadelphia and London: W. B. Saunders Company. 1924. With 419 illustrations, many in color. 433 p. Price \$5.50.

This is a concise modern-type presentation of human development, reinforced by a liberal admixture of the developmental stages in the simpler lower animals. The reviewer enjoyed the oppor-

tunity of studying this summary of the advances in embryology since his student days of twenty odd years ago. And yet after all, in spite of the tremendous amount of conscientious work done, how little of practical or theoretic import has been added since the dawn of the present century! The reviewer cannot help from wondering whether this relative lack of advance is due to over specialization rather than exhaustion of the subject. Against exhaustion stand the numerous alternate and contradictory theories, which for specific example still cloak our ignorance on so elementary a subject as the genesis of leucocytes and erythrocytes. While on the other hand it is encouraging to note that the old conception of the fetal circulation gained purely by a study of morphology has been made to check better with reason by bringing into consideration the physiologic factors involved. This book is recommended to practitioners specially trained and interested in anatomy, in spite of the fact that it does not give cross references to the outstanding literature. As for the average practitioner or first year medical student, my advice would be to hunt around in second-hand bookstores for an old-fashioned simpler book—say a McMurrich, vintage of 1902.—M. P.

DISEASES OF THE EYE. A Handbook of Ophthalmic Practice for Students and Practitioners. By George E. de Schweinitz, M.D., LL.D. (University of Pennsylvania); Sc.D. (University of Michigan) Tenth Edition, Reset with 434 illustrations and 7 colored plates. Philadelphia and London. W. B. Saunders Company. 1924. Price \$10.00 net.

If the reception of a textbook by the profession is any criterion of its value, DeSchweinitz's "Diseases of the Eye" is a valuable book. In the thirty-two years since its first publication in 1892 it has been reprinted fifteen times, and now appears in the tenth edition with all the familiarity of an old friend and all the interest of new information and knowledge.

Perhaps no textbook on the eye is better known to American ophthalmologists, therefore little need be said in review. That little is wholly commendatory. The arrangement of the matter is excellent. The style is clear and easy to read. The author speaks with his own authority, but is not dogmatic. A textbook is necessarily behind current literature in "up-to-dateness" but should be more reliable in conclusions. Apparently that is true of this book. The subject matter is complete and as up-to-date as possible, and the illustrations are good.

Typographically and mechanically it is all that could be desired. The index, so often unsatisfactory, is a model, being as concise as completeness will admit.—G. E. B.

OPERATIVE SURGERY. Covering the Operative Technic Involved in the Operations of General and Special Surgery. By Warren Stone Bickham, M. D., and Phar. M. (Tulane), M.D. (Columbia), F. A. C. S. Volume VI. Philadelphia and London. W. B. Saunders Company. 1924. Price \$10.00 per volume.

The appearance of volume six, with the index of the entire work, concludes the most stupendous work on surgical technic which has yet appeared. This volume deals with the operations on the female and might well bear the subtitle of "Operative Gynecology." It compares with Crossen's masterpiece.

This volume like its predecessors, is eminently satisfactory and forms a monument to the industry and ability of the distinguished author.—A. E. H.

DISEASES OF THE HEART. By Dr. Henri Vaquez, Professor of the Faculty of Medicine of Paris. Translated and edited by George F. Laidlaw, M.D., Associate Physician to the Fifth Avenue Hospital, New York City. Introduction by William S. Thayer, M.D., Johns Hopkins Hospital, Baltimore. Philadelphia and London. W. B. Saunders Company. 1924. Price \$8.50.

In this volume we have one of the most recent, as well as one of the best works and on a distinctly French presentation of the morbidity of the heart and circulatory system.

Vaquez, while most complimentary to the contributions of English and other authors, does not hesitate to call attention specifically to some inadequate theories and opinions on cardiac and valvular efficiently and to the limitations of certain therapeutic means, largely held in the past as specific. Pertinently does the author hold that there has been too much generalization and that in considering a possible amelioration or cure of heart failure "we must seek in the examination of *each* patient the means of cure."

In a very rational and clear way there is presented the graphic methods and means now being used in modern clinics and by the careful investigator to determine the more accurately specific functions and degree of cardiac efficiency. The two means now being given more consideration are the mechanical and the electrical, as illustrated in the sphygmograph and the electrocardiograph.

Vaquez claims that by means of the electrocardiograph it has been determined that the sinus, a vestige of the primitive cardiac tube, is the seat and origin of the heart's contraction and regulation; that through such means of diagnosis all arrhythmias can be identified and any disorder of conductivity made known.

Special signs and symptoms are dealt with and to a greater extent than by most authors. For instance, several pages are devoted to cyanosis, its origin, pathogenesis and significance. Likewise the indifference of Mackenzie and Lewis to the presence of certain murmurs, in the absence of established signs of decompensation, influences Vaquez to urge careful study in every heart case demonstrating a murmur.

In the presence of cardiac symptoms this French author analyses such not synthetically, but analytically, contemplating constantly the anatomy and physiology of the various structures involved in the performance of heart functions. He points out that there is a myocardium whose muscular tone is of both immediate and constant importance for present stress and throughout the whole of life; second, a function of conductivity, in extrinsic and intrinsic nervous mechanisms, regulatory to both cardiac and arterial equilibrium; and finally an excitability peculiar to each case under observation.

In the section on cardiac therapy Vaquez specifically and positively, from his own and others investigation, holds that digitalis is not a tonic to the myocardium, and that strophanthus meets indications not common to the digitalis group; a fact which should interest all clinicians.

In the chapter on "adaption," the author briefly but succinctly warns both doctor and patient that at the earliest signs of decompensation serious attention should be given to all habits and activities of life, including exercise, diet and social relations.

A bibliography follows each division adding very materially to the value of such a treatise.

It should be stated that the table of contents is far above the average in being both specific and brief. There are five divisions, as follows, with well classified subdivisions: I. Methods of Examination. II. The Cardiopathies and Hypertension.

III. The Arrhythmias. IV. Heart Failure. V. Treatment.

Vaquez's treatise on "Heart Disease" is most practical, comprehensive and timely. It should be read by every student and practitioner of medicine.—S. P. C.

APPLIED ANATOMY. The Construction of the Human Body Considered in Relation to its Functions, Diseases and Injuries. By Gwilym G. Davis, M.D. Revised by George P. Muller, M.D., Professor of Clinical Surgery in the University of Pennsylvania. Sixth Edition. Cloth. Price, \$9. Pp. 638, with 656 illustrations. Philadelphia: J. B. Lippincott Company, 1924.

It is peculiarly fortunate that the revision of this splendid work on our surgical anatomy should have been entrusted to a man at once so capable and so sane as Dr. Muller notably is. The publishers are to be congratulated upon Dr. Muller's success in preserving intact the charm, simplicity and lucidity which characterized the preceding editions of this book, adding only those things necessary to keep it abreast of the present thought and practice; eliding only those things which are obsolete.

If one wished to indulge in meticulous criticism, he might wonder why cervical sympathectomy and paravertebral nerve block are discussed at considerable length and section of the sympathetic rami communicantes not mentioned or why hip joint amputation employing Wyeth's pins is retained. Probably such criticism would be more fitting if the work were designed as a text on operative surgery, an intent which the authors specifically disavow.

The volume is superbly printed and is illustrated by a profusion of drawings of more than ordinary value in their relationship with the text.—R. D. I.

THE PRACTICE OF PEDIATRICS. By Charles G. Kerley, M.D., Formerly Professor of Diseases of Children, New York Polyclinic Medical School and Hospital, and Gaylord W. Graves, M.D., Associate in Diseases of Children in the College of Physicians & Surgeons, New York City. Third edition, revised and reset. Philadelphia and London. W. B. Saunders Company. 1924. Price \$9.00.

There is no doubt that the youngest branch of internal medicine, pediatrics, has now escaped the confines of a single volume. Still, most of us must read as we run. We need not bemoan the fact that compendiums we have always with us.

The textbook under consideration, has none of the drawbacks of the manual or of the "system." It is a complete work, its revision has been thorough, and its illustrations are well chosen and as profuse as the space allows. These facts, however, do not prevent one from getting the impression that the important sections on infant nutrition, and on the classification and management of such conditions as marasmus or athrepsia and the severe infantile diarrheas, are so very conservative as to suggest the date of 1914 instead of 1924. Strict adherence to the principles set forth in these chapters would confirm the old aphorism that a baby fed by a specialist is a hungry baby. This applies particularly to the author's treatment of the mal-nourished infant who so urgently need double or even triple the usual number of calories per kilogram. If a textbook of pediatrics stands or falls on its treatment of the subject of infant nutrition and its disorders, then it must be said that the present volume does not deserve a very high place.

For careful, concise discussion of the remaining pathological conditions of infancy and early childhood the book can without hesitation be recommended to both students and practitioners.—P. J. W.

A PRACTICAL TEXTBOOK OF INFECTION, IMMUNITY AND BIOLOGIC THERAPY with special reference to immunologic technic. By John A. Kolmer, M.D., Dr. P.H. Professor of Pathology & Bacteriology in the Graduate School of Medicine, University of Pennsylvania, with an introduction by Allen J. Smith, M.D., Professor of Pathology in the School of Medicine of the University of Pennsylvania. Third Edition, Thoroughly Revised and mostly Rewritten. Octavo of 1210 pages containing 202 original illustrations 51 in colors. Philadelphia and London; W. B. Saunders Company, 1923. Cloth, \$12.00 net.

The principal changes in this new edition of Kolmer has been the expansion of the subjects of vaccine and serum therapy and the treatment of disease with nonspecific protein therapy. Chemotherapy has been omitted. The chapters on immunologic methods and technic have been amplified. The standardization of the complement fixation test in syphilis as worked out by the author is covered completely. Nearly all the chapters have been rewritten and new chapters added on the biologic therapy of tuberculosis and on blood transfusions. Many new illustrations have been added. This book is too well known and appreciated by all workers in this field to need further praise from the reviewer.—R. L. T.

THE PATHOLOGY AND TREATMENT OF DIABETES MELLITUS. By George Graham, M.A., M.D., F.R.C.P. First Assistant in the Medical Clinic, St. Bartholomew's Hospital; Physician, Royal Northern Hospital. London Henry Frowde and Hodder & Stoughton. American Branch 35 West 32nd St., New York City. Price \$2.00.

This small book of 188 pages embodies the subject matter presented by the author in a series of lectures on glycemia and glycosuria. The chapters on physiology are brief but the references to important works of older authors are good. The chapters explaining the author's method of treating diabetes are of interest only to those who are curious as to the many variations in details that various authorities in the field of diabetic dietetics have advocated. The principles underlying the author's treatment are those of under-nutrition to which he has added insulin. No improvement over Joslin's methods is evident. The author's experience with insulin at the time the book was published covered only twenty-five cases.—W. H. O.

PRECIS DE CLINIQUE SEMIOLOGIQUE. Diagnostics, Pronostics et Traitements. Par Gaston Lyon, ancien chef de Clinique medicale de la Faculte de Paris. 1 volume de 700 pages. Masson et Cie, editeurs, 120 Boulevard St. Germaine, Paris, VIe, France. Prix 22 fr.

This volume is closely packed with information for one who is about to prepare for an examination. It goes into detail on the theoretic side of the various diagnostic procedures. It would be of small interest to the practitioner of medicine unless he is getting ready for another state board or national board examination. The illustrations are few and mostly tracings. The arrangement of material is satisfactory. The paper is of good quality, the print clear.

The author divides his study into six groups: The first is the taking of the history, the second the physical examination, the third the laboratory examination, the fourth the study of the various special senses and the study of the pathogenesis of the condition, the fifth the discussion of prognosis, and sixth the therapy. This scheme would, of course, be of considerable value for routine employment in any office. G. H. H.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

ANTIMONY THIOLYCOLLAMIDE.—The triamide of antimony thioglycollic acid. It contains not less than 30 per cent of antimony. Antimony thioglycollamide and antimony sodium thioglycollate have been tested on rats, rabbits and dogs inoculated with trypanosomiasis by Rowntree and Abel. These workers suggested the employment of these antimony compounds in the treatment of human trypanosomiasis and the larger animals. Randall has used both of these antimony compounds intravenously and intramuscularly in granuloma inguinale with marked success. In the doses employed they were less toxic than tartar emetic and the results were more favorable. From the available evidence the experimental use of these compounds in kala azar would seem to be justifiable. Hynson, Westcott & Dunning, Baltimore. (*Journal A. M. A.*, Feb. 7, 1925, p. 441.)

TINCTURE DIGITALIS PURIFIED (Fat Free)—S. and D.—A fat-free tincture of digitalis corresponding in strength to tincture of digitalis—U. S. P., containing 45 per cent of alcohol. It is standardized by the one hour frog method of the U. S. Pharmacopoeia. The actions, uses and dosage are the same as that of tincture of digitalis U. S. P. Tincture digitalis purified (fat-free)—S. and D. was introduced at a time when the "fat" of digitalis was believed to cause gastric disturbance. At present this claim of superiority is not tenable and the preparation is sold simply as a standardized tincture of digitalis. Sharp and Dohme, Baltimore. (*Jour. A. M. A.*, Jan. 24, 1925, p. 285).

MERCURETTES—P. D. AND Co.—Briquettes, each containing finely divided metallic mercury 3.25 Gm. (50 grains) incorporated with theobroma (cacao butter) and perfumed. The actions and uses of mercurettes are the same as those of ointment of mercury U. S. P. It is claimed that in the treatment of syphilis and certain forms of parasitic skin diseases where ointment of mercury has been employed, the use of mercurettes permits a more accurate dosage and is more convenient and less disagreeable. Parke, Davis and Co., Detroit.

ANTIMONY SODIUM THIOLYCOLLATE.—A compound formed by dissolving antimony trioxide in a solution of a mixture of sodium thioglycollate and thioglycollic acid. It contains not less than 37 per cent of antimony. The actions and uses of antimony sodium thioglycollate are the same as those of antimony thioglycollamide, but it is more soluble and in higher doses appears to be less toxic. Hynson, Westcott and Dunning, Baltimore. (*Jour. A. M. A.*, Jan. 31, 1925, p. 369.)

CINCHOPHEN—B. P. C.—A brand of cinchophen—N. N. R. For a discussion of the actions, uses and dosage, see New and Nonofficial Remedies, 1924, p. 93. Benzol Products Co. Newark, N. J.

HOYT'S PROTEIN CEREAL.—Hoyt's special gluten flour (New and Nonofficial Remedies, 1924, p. 195) cooked and made into flakes. Pure Gluten Food Company, Brooklyn, N. Y.

TABLETS IODO-CASEIN WITH CHOCOLATE.—Each tablet contains iodo-casein (New and Nonofficial Remedies, 1924, p. 156) equivalent to 0.01 Gm. iodine. H. K. Mulford Co., Philadelphia, (*Journal A. M. A.* Feb. 28, 1925, p. 675.)

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies
Issued Monthly under direction of the Publication Committee

VOLUME XXII

MAY, 1925

NUMBER 5

E. J. GOODWIN, M. D., EDITOR
901 Missouri Theatre Building, St. Louis, Mo.

PUBLICATION { W. H. BREUER, M. D., Chairman
COMMITTEE { C. B. FRANCISCO, M. D.
M. A. BLISS, M. D.

ORIGINAL ARTICLES

DENTAL INFECTION AND SYSTEMIC DISEASE

Cases Illustrating Evidence of the Relation by Animal Experiments

From the Department of Medical Research, Deane Institute, Kansas City, Mo.

RUSSELL L. HADEN, M.D.

KANSAS CITY, MO.

Few clinicians doubt that serious systemic disease may be initiated and continued by a small circumscribed area of infection in itself symptomless. Proof of the causal relation is often unsatisfactory or entirely lacking. In certain cases the relief of symptoms or even cure of a systemic disease following the removal of a chronic focus seems to prove the intimate relation of the focus to the systemic disease. *Post hoc ergo propter hoc* reasoning is, however, notoriously fallacious. Often, too, the anatomic basis of the patient's malady precludes the possibility of cure. Here the most to be hoped for is a stay in the progress of the disease which will be only very indirect proof of the relation of the focus to the disease.

Attempts have been made to find proof of causal relation through complement fixation tests, or other laboratory procedures. Certain observers, for instance, think that a lymphocytosis indicates a patient is absorbing bacteria or toxins from a periapical dental infection. Other blood changes supposedly characteristic of this condition have been described. It is very questionable, however, whether such blood studies throw any light on the causal relation of chronic focal infection to systemic disease.

Certainly the best proof we have of the etiologic relationship of a focus of infection to a given lesion is the reproduction in animals of the lesion from which the patient suffers by the intravenous injection of bacteria recovered from the focus in the patient. This is based on the fact that bacteria really causing disease

tend to reproduce in animals lesions similar to those of the patient, as shown by Rosenow. The success of attempts to reproduce lesions in animals depends primarily on the use of the

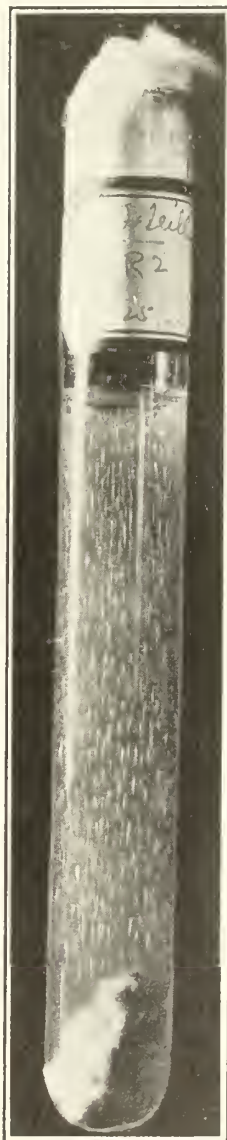


Fig. 1. Culture in deep tube of glucose brain broth agar from an area of apical infection. Note the profuse growth of bacteria throughout the tube.

proper culture mediums in which the specific affinity is retained during the period of incubation and the rapid transfer of organisms from the patient to the experimental animal.

This method of proof of the causal relation of a certain focus to a diseased condition can be best illustrated by a few case reports, with



Fig. 2. A. Radiograph of teeth of patient (Case 1) suffering from peptic ulcer. B. Stomach of rabbit injected with the culture from the tooth indicated by arrow. Note the numerous areas of hemorrhage and erosion. The second tooth shown in the radiograph was also proven to be badly infected on culture but produced no gastric lesions in rabbits when injected.

the protocols of the animal experiments. The cases cited have been selected rather at random from a large number of experiments to show the relation of dental infection to different systemic diseases. Details of the methods of obtaining the culture material and making the cultures have been described elsewhere. All cultures have been made in deep tubes of glucose brain mediums to preserve the specific affinity of the organisms.

The animals have been inoculated intravenously with 5 c.c. of the original broth culture of the infected material. The culture employed is never over, and is often less than, 24 hours old. The animals have been autopsied from three to six days after the injection.

PEPTIC ULCER

Case 1. W. T. G., a business man, age 43, complained of a dull burning sensation in his epigastrium in October, 1922. The trouble came on one-half to two hours after meals and was relieved by food and heartburn but no acute pain or vomiting. The physical examination was negative except for tenderness at the tip of the ninth rib in front and several pulpless teeth. The tonsils had been removed. The patient became symptom-free on a special diet until April, 1923, when he presented typical symptoms of a duodenal ulcer. Gastric

analysis showed free HCl, 40 per cent acidity and total acid, 65 per cent acidity. The radiographic examination revealed a marked deformity of the duodenal bulb. Radiographs of the three pulpless teeth at this time showed that all had some bone absorption around the root tip (Fig. 2). The three teeth were extracted. Cultures of each tooth in deep tubes of glucose brain broth showed many colonies of bacteria.

Animal inoculation: Two rabbits were injected with the broth culture from each tooth. Two animals showed no lesions anywhere and two only purulent fluid in the larger joints. The two rabbits injected with the culture from the upper right lateral incisor (Fig. 2) died the day following injection. There were many hemorrhagic areas with erosion in the stomach, some of which had progressed to ulceration (Fig. 2). Three other animals were injected with the same organism in doses down to 0.5 c.c. All showed at autopsy hemorrhage in the gastric mucosa.

CHRONIC ARTHRITIS

Case 2. P. P., a student, age 22, complained of rheumatism. He had had numerous attacks of tonsillitis and a Neisser infection two years before. He was dyspneic on exertion. He had had pain in both feet for eight months and for six weeks the knees, elbows, shoulders and fingers had been painful without swelling or redness. On examination the tonsils were evidently infected. There was a loud systolic murmur at the apex. The urine showed nothing abnormal. The Wassermann test was negative. The white blood count was 12,200, the red cells 4,976,000, and the hemoglobin 90 per cent.

The dental radiographs revealed six pulpless teeth only three of which showed absorption of bone around the root tip. Two infected central incisors were extracted without causing any change in the patient's condition.

Following the extraction of the molar teeth the patient's symptoms cleared up entirely. When seen a year later there had been no return of the joint trouble.

Animal inoculation: Two rabbits were injected with the pure cultures of non-hemolytic streptococci obtained from the upper and lower right second molars. Both animals developed pericorneal injection.

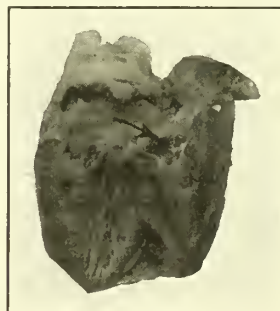


Fig. 3. Heart of rabbit injected with the culture from the infected teeth from Case 3.

tion. One died during the night with a marked infection around the joints. The other was killed two days later. There was a marked purulent arthritis with no other lesions.

ACUTE PHLEBITIS

Case 3. J. W. P., a physician, age 60, had had a

phlebitis of the left femoral vein in 1904 following an acute alveolar abscess. Following this there were frequent flare-ups of the dental infection without further signs of systemic disease. In 1914 he began to have anginal attacks which continued to 1916. The attacks were entirely relieved by the removal of an infected tooth. In March, 1923, the root of the bicuspid tooth became infected and following this he had a recurrence of the phlebitis and anginal attacks. In June, 1923, a non-hemolytic streptococcus was recovered from the blood. He became progressively worse, developed myocardial insufficiency and died. At autopsy there were multiple infarcts in the heart muscle.

Animal inoculation: After the extraction of the bicuspid root, the infection of which had initiated the present illness, cultures were made from the socket and two rabbits were injected. The culture showed only a green producing streptococcus. The rabbits at autopsy showed only endocardial vegetations and infarcts of the myocardium. The upper right second and third molars were extracted in July, 1923. A profuse growth of streptococci was obtained from both. Two rabbits were injected. One was dead the following morning. The autopsy revealed only multiple hemorrhages at the base of the valves. The second rabbit was dead 48 hours after injection. The examination showed only vegetations of the heart valve (Fig. 3).

ACUTE PYELONEPHRITIS

Case 4. Mrs. L. E., a physician's wife, age 28, began to have pain in the second left lower bicuspid tooth about November 1, 1923. An inlay was removed and the root canal was treated a number of times and a temporary filling put in. The first part of January the tooth was again painful for a week. She then suddenly began to have pain in the right kidney region. The temperature at this time was normal. The following day she had a chill, the temperature rose to 102° and the pain in the kidney region continued. There was some frequency of urination. The urine contained much pus and some gram positive cocci. The fever continued for one week, the pyuria for three weeks.

Radiographs of the teeth taken February 8 showed no destruction of bone or absorption of the root tip of the lower second left bicuspid. The periodontal membrane at the tip was thickened. A root tip was present in the region of the left lower third molar (Fig. 4). The bicuspid and the root tip were removed February 11, 1924. A profuse growth of a green producing streptococcus was obtained in broth culture.

Animal inoculation: Four rabbits were injected intravenously with 5 c.c. of the broth culture from the bicuspid and two with a like amount of the culture from the third molar root tip. The two rabbits injected with the culture from the third molar showed no kidney lesions.

One of the rabbits injected with the culture from the bicuspid died soon after injection. The other three were killed after an interval of 48 hours. One showed many small hemorrhages and a few abscesses in the cortex and numerous abscesses in the medulla. The organisms were by culture of the kidney. This animal also showed a few hemorrhages around the joint and many abscesses in the myocardium. The other two rabbits showed many abscesses in the medulla of the kidney (Fig. 4) with no lesions elsewhere.

Two rabbits were injected with the streptococci recovered from the kidney of one animal injected with the original culture. One showed at autopsy

many abscesses in the kidney medulla with no lesions elsewhere. The other showed similar changes in the kidney and abscesses in the muscles, iritis and hemorrhages in the duodenum.

RECURRENT UVEITIS

Case 5. Mrs. F. T., housewife, age 43, had had typhoid fever in 1914 and rheumatism during the past year. Her eye trouble began in 1912 with a severe attack of iritis with almost complete loss of vision in the left eye. A second attack occurred in 1916. She had no further trouble until December, 1922, when the iritis again recurred in the left eye followed by another attack in January, 1923. When first seen in March 1, 1923, there was no light perception and the eye showed that the whole uveal tract had been involved. The patient stated that a



Fig. 4. A. Recently treated tooth of patient suffering from an acute pyelonephritis (Case 4). There is no radiographic evidence of infection but cultures showed a profuse growth of streptococci. B. Photograph of kidney of rabbit injected with the culture from the tooth shown in A. Note the numerous abscesses in the medulla of the kidney.

large filling had been placed in the right lower first molar in 1912. The tooth became very painful. The filling was removed to "let the gas out" and replaced. The attack of iritis developed soon after the tooth trouble. An examination of the right eye showed no light perception, posterior synechiae, without active infection. The vision in the left eye was 20/20. There were posterior synechiae but no inflammation.

The patient was undernourished. The tonsils were small. The general physical examination was otherwise negative. The blood count showed 4,300,000 red cells, 8,700 white cells and the following differential: PMN, 66.4 per cent; PME, 2.6 per cent; PMB, 0.8 per cent; SM, 28.2 per cent; LM, 2.0 per cent. All the upper teeth had been extracted. A radiograph showed no apparent bone infection in the upper jaw. There were no pulpless teeth in the lower jaw. The right lower first molar had a very large silver filling, was tipped forward and had a

pocket around it (Fig. 5). The tooth responded however to tests for vitality. This tooth was extracted. On opening the pulp chamber under sterile precautions it was found that the pulp chamber had been encroached upon by secondary dentine formation. The nerve was injected and edematous and showed a pure culture of streptococcus. The same organism was obtained in the culture of the root tips.

Animal inoculation: Two rabbits were inoculated with the mixed cultures from the pulp and root tip, February 2, 1923. One developed an extreme pericorneal injection which was less marked the following day. February 7, the circumcorneal injection had returned in the right eye. There were multiple hemorrhages in the iris and cloudy fluid

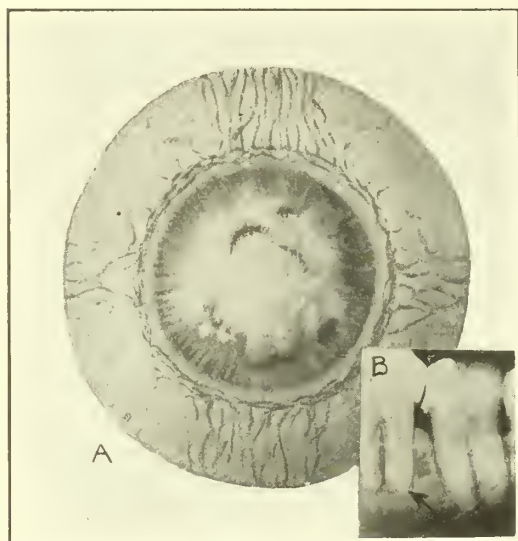


Fig. 5. A. Eye of rabbit injected with the culture from the molar tooth shown in B. The patient (Case 5) was suffering from recurrent attacks of iritis.

in the anterior chamber (Fig. 5). Autopsy revealed also abscesses of the kidneys, white streaks in the muscles and a purulent arthritis. The other animal showed only cloudy fluid in the joints.

ACUTE ENCEPHALITIS

Case 6. J. B., a lawyer, age 53, complained of paralysis of the face. He had had excellent health before the present illness except for deafness in the left ear which had been present for ten years. Two weeks previously he had gradually developed a partial paralysis of the left facial muscles. He next noticed it was difficult to hold things in his right hand. Three days before his wife had noticed a violent jerking of the left hand and arm during sleep.

The patient was a large, robust man. There was definite partial paralysis of the left side of the face. The movements of the left hand were clumsy, although there was no weakness or ataxia. The Babinski on the left was equivocal. The eye grounds were negative. All deep reflexes were active, the left slightly more so than the right. There was no clonus. The blood pressure was 170-95. There was no anemia. The white blood count was 10,150 with 72 per cent polymorphonuclears. The urine showed no albumen or sugar. The microscopic examination showed only a few pus cells. The blood Wassermann was negative. The paralysis became pro-

gressively worse; he became comatose and died six weeks after the onset of his illness.

The radiographic examination showed no cavities or pulpless teeth. There was very marked pyorrhea. There were two remaining roots without much evidence of infection. Around the upper left cuspid there was a pocket extending deep into the bone.

Animal inoculation: Two rabbits were injected with the mixed cultures from four extracted teeth, but showed only kidney abscesses and endocardial vegetations. Two animals injected with a culture from the pocket around the upper left cuspid developed iritis and meningitis. The spinal fluid was turbid and showed streptococci in smears.

Two rabbits injected with the culture from four other teeth and a second culture of the pocket showed kidney abscesses arthritis and abscesses of the muscles.

Two animals were injected with a third culture from the pocket around the cuspid. One showed injection of the brain and the spinal fluid showed a green producing streptococcus and a staphylococcus. There were some hemorrhages in the duodenum and abscesses in the kidney and muscles. The second rabbit showed the same. Two rabbits injected with mixed cultures from four teeth showed meningitis and hemorrhages in the brain. There were also abscesses of the kidney and muscle, a purulent arthritis and endocardial vegetations. The spinal fluid cultures showed streptococci and staphylococci.

MULTIPLE ONYCHIA

Case 7. C. S., a maid, age 31, complained of nervousness and trouble with the finger nails. She had had the usual diseases of childhood. Four years before, she had had an attack of iritis, followed by a second attack a year later. Three years before she had had two attacks of "kidney trouble." At this time she was confined to her bed and suffered from weakness and frequent urination.

The patient said that there had been swelling, redness and tenderness around the nail of the right middle finger at intervals for three years. Four weeks before an attempt was made to extract the lower right bicuspid tooth. Soon after this the right thumb became red, swollen and painful around the nail.

On examination, the patient was found to be in a good state of nutrition. The iris showed remains of an old iritis. Free pus could be expressed from the tonsils. The heart sounds were distant with the suggestion of a diastolic whiff down the left sternal margin. The blood pressure was: systolic, 110; diastolic, 65. There was marked swelling, redness and tenderness around the nail of the thumb and middle finger of the right hand (Fig. 6).

A blood count showed 4,460,000 red cells and 8,300 white cells. A differential count revealed: polymorphonuclear neutrophils, 66.6 per cent; eosinophiles, 0.2 per cent; basophiles, 1 per cent; lymphocytes, 28.4 per cent; large mononuclears, 3.8 per cent. The urine was negative for albumen and sugar. It showed no pus nor casts. The Wassermann test was negative.

A radiograph of the teeth revealed six nonvital teeth, only one of which showed an area of bone absorption around the apex. The root of the lower right bicuspid had been broken off and showed a large area of bone destruction around it.

The broken off root and all the nonvital teeth were extracted. One was sterile on culture, four showed streptococcus fecalis and one streptococcus salivarius.

Animal inoculations: Two rabbits were injected intravenously from each of the cultures obtained

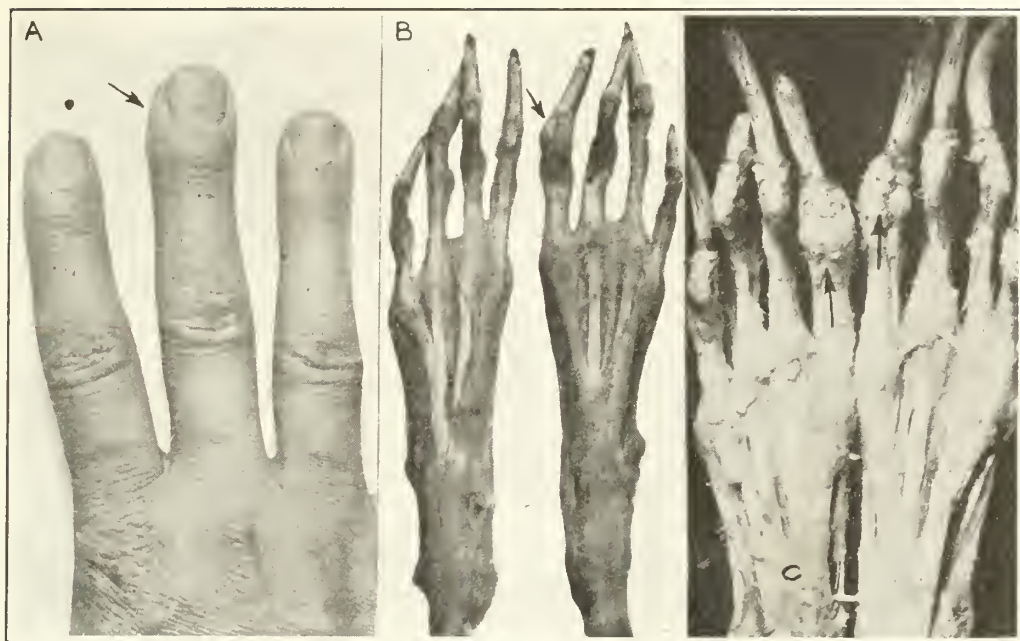


Fig. 6. Photograph of hand of patient (Case 6) showing swelling of middle finger due to onychia. B. Toe of rabbit injected with the streptococci from the infected teeth of patient. C. Toes of rabbit injected with the cultures from an area of infected bone in the same patient. Note the swelling around the base of the nail.

from the root ends. One of the rabbits injected with the culture from the upper right cuspid showed marked swelling around the nail of two toes (Fig. 6). One injected with the streptococcus grown from the upper left bicuspid showed a similar involvement of the first toe of the right hind foot and of the second toe of the right fore foot. The organism injected was recovered from the nail root of the second toe of the right fore foot. The organism injected was recovered from the nail root of the second toe of the right fore foot in pure culture.

One rabbit injected with the organism recovered from the root of the right lower bicuspid had injection, hemorrhage, and edema around the nail root of the toes of the right fore foot. One toe of the left hind foot and one of the right hind foot showed the same picture. One of the rabbits injected with a culture from the curetting of the socket of the same tooth showed hemorrhage and swelling around several toes.

Altogether sixteen rabbits were injected with cultures from eight different areas. Four of the rabbits developed onychia. Two of the four were injected with the culture from the lower right bicuspid. The involvement of the thumb of the patient had followed the breaking off of this tooth in an attempt at extraction.

The nail lesions did not heal completely although there was some improvement. One year after the teeth were extracted some were curetted. One of the two rabbits injected with the culture from the area in the upper left developed marked onychia (Fig. 6). Following the removal of these residual foci the patient has recovered completely.

THE FEMALE URETHRA*

H. McCLURE YOUNG, M.D.,

ST. LOUIS

Much has been written about the female bladder but experience has convinced me that the female urethra gives us rather more trouble than the female bladder. I am speaking of course of cases where there is no renal involvement.

It is well known that a lesion situated low in the bladder, that is near the vesical outlet, gives more trouble than one situated high up and I believe it is equally true that the further down a lesion of the female urethra is the more distress it occasions. The external meatus is exceedingly sensitive to the presence of the slightest abnormality and will amply repay a very careful study. A strange feature of these lesions at the meatus is that they seldom give rise to any sharply localized pain. In fact, patients rarely complain of any distress at the seat of the lesion. They come complaining of frequent painful urination, urgency and even incontinence if conditions are such that they cannot immediately relieve themselves. When asked where the pain is, they will state that it is low in the abdomen; they will place a hand over the suprapubic region and state that it extends clear across or even at times

*Read before the St. Louis Medical Society, October 21, 1924.

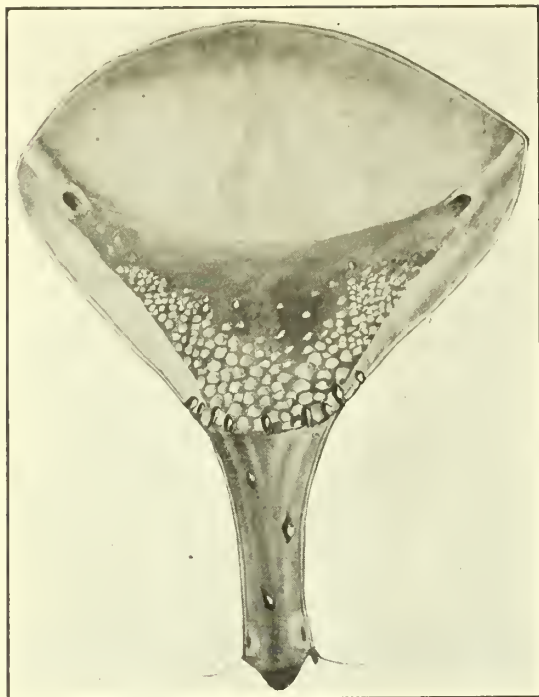


Fig. 1. General view of the lesions of trigono-urethritis. (Semi-diagrammatic with the bladder and urethra laid open above.) Note the bullous edema of the trigone, the polyps about the sphincter margin and along the urethra, the enlarged and inflamed opening of Skene's ducts, and the caruncle at the meatus.

that it goes up the flanks into the lumbar regions, suggesting the possibility of some kidney trouble. The pain appears to be situated low in the pelvis, in the bladder as the patient states and occasionally to radiate upward and outward. It is only when specifically questioned that such a patient may recall some slight discomfort in the region of the external meatus but this is evidently a matter of very slight concern to her. She will, therefore, do what she can to mislead you and only a very careful examination will reveal the true state of affairs.

Many of these women have suffered for years. Some have been cystoscoped and told that they had a trigonitis. Treatment has relieved them somewhat for a while but the trouble has recurred. The urethra apparently is seldom considered as a possible source of their trouble. But the existence of a trigonitis should always direct our attention to the urethra. What is sometimes referred to as a trigonocystitis would much better be described as a trigonourethritis. The trigone and urethra are much more intimately associated pathologically than the trigone and the rest of the bladder. Let us grasp, therefore, the concept of a trigonourethritis as a clinical entity and we shall have made a great

step forward in the handling of all this group of cases. Let us remember also that a caruncle is the product of a chronic inflammatory process. It doesn't just happen. It is a buckling and protrusion of the mucus membrane on the floor of the urethra at the meatus, due to inflammatory thickening or hypertrophy, and this inflammatory process certainly extends up the urethra. Often it goes as far as the bladder neck. Not infrequently it spreads out over the trigone.

In order to fix this concept of a trigonourethritis clearly in mind let us consider the complete and perfect picture.

The kidneys and the vault of the bladder are normal. The ureteral orifices are normal, or if the trigonitis extends upward far enough to involve them, they are at least not more puffy than the mucus membrane around them and below them. The trigone itself is very red and as we approach the vesical orifice its markings become washed. Small, pearl-like bullae come into the picture giving it the appearance of a cobblestone pavement and at the vesical orifice these become larger some attaining the size of translucent blebs. About the sphincter margin, polypoid excrescences are to be found. These are inflammatory glandular hypertrophies. They are about the size and shape of a grain of wheat and are sometimes so numerous as to form a sort of fringe about the sphincter margin, especially above and to the sides. They are peculiar to the urethral mucosa and do not occur within the bladder proper or upon the trigone. Proceeding now into the urethra we find the mucous membrane thick and leathery so that the vesical orifice is somewhat distorted. It does not close down to a point as it should but

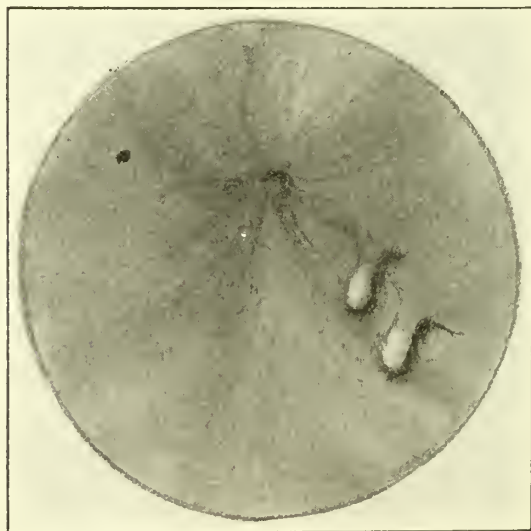


Fig. 2. Polyps in urethra.

forms a triangle, the sides of which collapse in a loose, inelastic fashion. The entire urethral mucosa is red and thickened and may assume a quite angry appearance as we near the external meatus. Polyps may be found anywhere along the canal. The orifices of Skene's glands are large, puffy and surrounded by a white zone. They are exquisitely sensitive. The external meatus itself has hypertrophied tags about it and a caruncle on the floor.

Of course the picture is seldom complete and in many cases only a few of all the lesions described are present. The process may be limited to the lower half or two-thirds of the urethra and these patients are often quite as loud in their complaints as those having a much more extended pathological process. The urinary findings will of course vary with the extent of the lesion. In the more extended cases the urine may be quite cloudy, containing pus and a trace of albumen. In the more limited cases it may contain only a few flakes and shreds or again it may appear perfectly clear though some pus and epithelium can nearly always be found if carefully looked for. As for the bacteriology we find almost all the common pyogenic bacteria except the gonococcus. These cases are chronic, are often found in middle-aged and elderly women, and while some of them may have originated as a gonorrhea it is not possible to prove it. A very large proportion of these patients I feel confident have never had a gonorrhea. Most of them have borne children but not all, and some are elderly spinsters.

For the successful treatment of these cases the first thing necessary is a complete, accurate

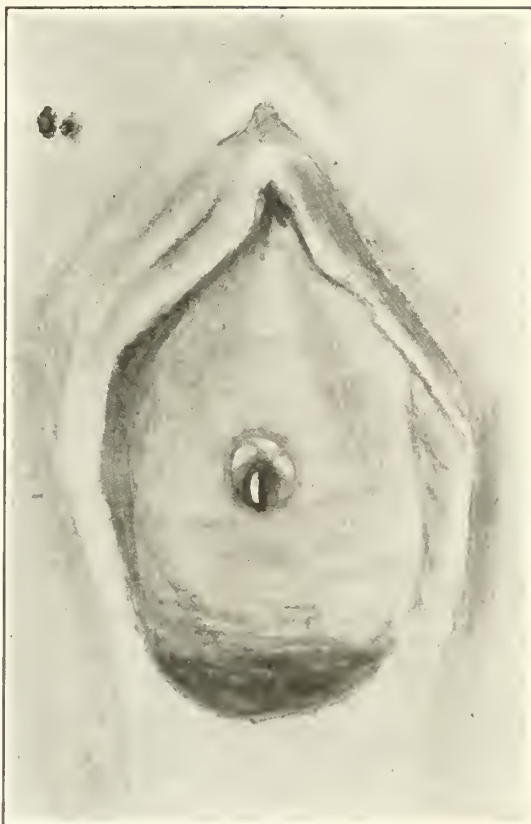


Fig. 4. Urethral caruncle protruding.



Fig. 3. Endoscopic view of the inflamed opening of one of Skene's ducts.

diagnosis. We first inspect the external urethra making note of any puffiness of the lips or any discharge that may be present. Then the lips are slightly separated and the floor of the urethra just within the orifice is carefully inspected. Often it will be found swollen, red and with a tendency to protrude as soon as the meatal lips are retracted. I prefer to describe such a condition as an early concealed caruncle. It will generally be found associated with some chronic inflammation in Skene's glands. These, however, are not readily seen without the aid of a speculum. Kelley insists that a caruncle is a new growth and must be sharply distinguished from the inflammatory hypertrophies of the mucosa which are so common. He states that a caruncle is pedunculated and therefore cannot be a product of inflammation. But polyps are also pedunculated and are certainly inflammatory products. I cannot see that anything is to be gained by attempting to distinguish between a pedunculated caruncle and the sessile type of inflammatory overgrowth. All caruncles are an expression of a chronic inflammatory process and where they are pedunculated it is probably because they are predominantly glandular in character.

The urine is now drawn off through a catheter, and it is well to collect it in two glasses. The first glass may contain some pus and epithelium picked up by the catheter in its passage through the urethra. The second glass will contain the true bladder urine. This

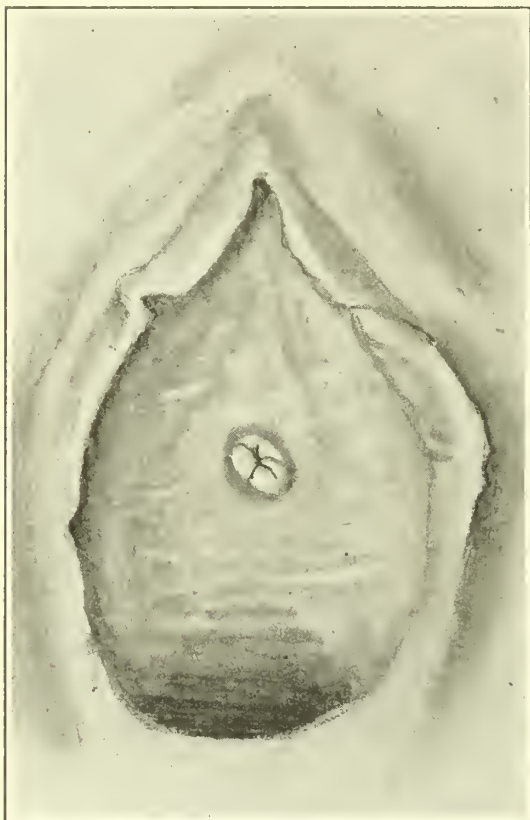


Fig. 5. Urethral meatus exhibiting slight hypertrophy of the mucous membrane with a slight tendency to the formation of tags.

may be perfectly clear. Or after a few days of preliminary treatment it may become clear. In any case the surgeon must satisfy himself that no kidney lesion exists, by urethral catheterization if necessary.

The cystoscope will reveal the condition of the trigonum and sphincter margin, but a urethroscopic examination is also essential. This is best undertaken with an irrigating endoscope of which there are several varieties on the market. I employ the Buerger universal urethroscope and for routine examination I prefer it without the telescope, using merely the plain glass window. Where any operative procedure or fulguration is to be done, the telescope is employed.

I have already described the lesions to be looked for and need not repeat their description. I should like to say a word, however, about the orifices of Skene's ducts. These are seen very clearly indeed through the irri-

gating endoscope. One might suppose that these little openings being so near the external orifice, could be better visualized with the unaided eye or with the help of some very simple retractor or speculum. I have found it very difficult especially in fat women to properly expose Skene's ducts even with the aid of a bivalve urethral speculum. In the case of an acute inflammation with profuse purulent discharge, especially if there is anything like an abscess in the gland itself, it may be easy. But my cases have all been chronic. I am convinced after considerable experimentation that by far the best access to these little ducts is through the irrigating endoscope.

Treatment consists in the removal of polyps by fulguration. This can be done through the endoscope or in some cases through the cystoscope. An exceedingly light cauterization can also be applied to hyperemic areas and granular spots. Caruncles are removed by fulguration also. Skene's glands may be treated by dilatation of the external orifice of the urethra with a good sized sound and the application of a ten or twenty per cent silver nitrate solution to the area. Dilatation of the entire urethra with sounds up to number 30 French is very useful after the gross lesions have been removed. With Kohlman's dilator these dilatations may be carried considerably higher in selected cases. Instillation of silver

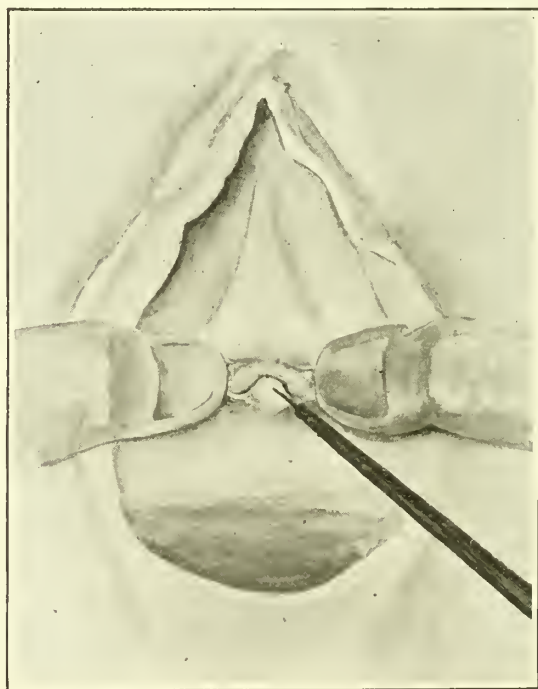


Fig. 6. Destruction of a concealed caruncle by light fulguration.

nitrate, mercurochrome or other medicament is a useful supplementary measure. Most cases can be relieved very promptly but in a few the symptoms will persist in spite of a prolonged and careful treatment. In such cases it is well to inspect the external meatus once more. Not infrequently what I have described as a concealed caruncle will be found. I recall one case where a little polyp at the sphincter margin had been burnt out but the relief afforded was not by any means complete and a subsequent cauterization of the floor of the meatus brought the desired results. Such cases are common. They are often regarded lightly by the surgeon but are considered a real calamity by the sufferer. They should not be put off with a diagnosis of essential bladder irritability or something of that sort. Instead a minute search for some lesion, however small, should be undertaken and where this is done the majority of these patients can be restored to a condition of tolerable comfort and to the enjoyment of life.

624 University Club Building.

DISCUSSION

DR. EDGAR F. SCHMITZ: I think we are indebted to Dr. Young for calling our attention to a subject which is treated very briefly in most textbooks.

As I looked over the various gynecologies which I possess, in anticipation of discussing this paper, I was amazed to find how little was written about so important a matter.

When these patients come into the office complaining bitterly of bladder irritability, as they express it, it makes one pause to consider why a diagnosis has not been arrived at sooner.

Many have been treated for cystitis, by the injection of various medications into the bladder, but these injections have not reached the seat of the trouble which is in the urethra, although the coexisting trigonitis is undoubtedly benefited.

This error in treatment I think is due, first, to the fact that many have not realized the importance of the urethroscope in making an accurate diagnosis in these conditions, and secondly, to faulty teaching which has stressed the acute urethral inflammations and relegated chronic urethritis to a very subordinate position.

In these cases of chronic urethritis we get the characteristic urethroscopic picture which Dr. Young has so clearly shown on the screen. The walls of the urethra do not fold in smoothly as the instrument is withdrawn and a distorted lumen is thus visible, which is due to the thickening of the deeper structures surrounding the tube. At times it is possible to palpate this thickened urethra through the vaginal wall. I would like to say a word about the relation of labor to this condition.

During the early period of labor the lower uterine segment gradually opens until complete dilatation and effacement of the cervix exists. At this time the bladder is pulled upward making a great strain on that portion of the organ which is fixed, namely the region of the trigone and urethra. Later as the head is expelled terrific strain in the form of pull and pressure is made on these structures, with resulting injury to the region of the bladder just about

the sphincter and the urethra. These injured areas may easily become infected and form the basis for the condition which Dr. Young has described.

There is just one thing in the doctor's paper with which I do not agree and that is his treatment of Skene's tubules. Personally I have never been able to inject them with any medication satisfactorily, and now use a cautery wire with which I destroy the entire tract.

DR. C. H. SHUTT: It might interest some of you to hear of an experience I have had with two patients in the last three years. The first was an unmarried woman about 56 who had been in the hands of a very competent urologist. She was complaining of very severe irritation of the bladder with frequent urination and a great deal of distress. She came to me through some other patient. I told her I did not believe there was anything I could do, but she was insistent, and I was somewhat interested because she had not been relieved.

In making an examination I found the uterus was not only small but the cervical canal was practically obliterated. There was no opening for drainage. That was the only abnormality I could locate, and I told her I did not know whether dilation of the canal would do any good.

To my great surprise she obtained great relief from her bladder symptoms. That was three years ago, and there has been only slight irritation since that time.

About six months ago a patient with similar complaints who had been in the hands of one of the most prominent urologists in the city, a married woman, came in. There was a scarred wound which produced almost complete closure of the cervical canal. I told her my former experience, and she decided to try the same treatment. She also was relieved.

Those two cases probably fall in the category of those Dr. Young mentioned as those which are not relieved by ordinary treatment. In these there must have been a certain lack of drainage and consequent absorption of protein substances.

DR. FRANK HINCHEY: I would like to hear Dr. Young's treatment of Skene's gland. I did not get it clearly from his paper, and I am quite interested in that. I have found the only thing of value was to cut the glands open.

DR. YOUNG, (closing): I think Dr. Schmitz did not quite understand. I said the meatus should be dilated. I did not speak of dilating Skene's glands. The dilation of the urethra presses on Skene's glands and expresses their contents and the region is then painted with silver nitrate. I agree it is difficult to dilate the gland itself. I have tried putting in a probe with silver nitrate, and found it very difficult to do that. I have always believed in very resistant cases the thing to do is to put in a fulgurating needle and then burn them out, I have done this occasionally but in practically all cases where I have dilated the external meatus and painted the area, I have found the patients were relieved. A year later some come back with slight complaint. Dilate them once or twice thereafter and they are all right. I do not doubt, though, that in resistant cases the thing to do is to destroy the glands.

THROMBO-ANGIITIS OBLITERANS A UNIVERSAL DISEASE*

THOMAS G. ORR, M.D.

KANSAS CITY, KANSAS

This very interesting circulatory disease has been described as quite common among the Russian Jews and Japanese. Its frequency among other races and nationalities makes it a disease worthy of careful consideration when dealing with circulatory disturbances in the extremities.

Buerger first gave the disease its name, which is very appropriate, signifying the pathologic changes that take place in its production. It is to be remembered that this disease is not an endarteritis obliterans as first described by V. Winiwarter, but a true angiitis involving all of the tissues of the blood vessels. It occurs in the middle aged and has been called pre-senile gangrene or the gangrene of the young. It has also been known as Buerger's disease because of Buerger's complete study of the condition and Yiddische or Hebraische Krankheit because of its frequency in Russian Jews.

The etiology of the disease is still unknown. It is very uncommon in females, Buerger¹ having seen but three in a series of 500 cases. Syphilis, typhus fever, sugar intolerance, endocrine dyscrasia, increased viscosity of the blood, toxemia, cigarettes and infection have been considered a cause. From present evidence it seems that the condition must be due to an infection of a very chronic nature, often, however, having an acute onset. Buerger is convinced of the infectious nature of the disease and Rabinowitz² thinks he has isolated the causative organism although his findings are open to some doubt. Thomas³ reports an early case with persistent leucocytosis with relative lymphocytosis which suggests infection. In two of my patients Dr. Russell L. Haden has made cultures from infected tooth roots which have been of sufficient virulence to kill rabbits in 24 to 48 hours. Lesions in the vessels of the extremities were not found in these animals although vegetations were found on the aortic heart valves. In spite of the difficulty in reproducing the blood vessel lesions experimentally we think it quite probable that the disease is due to a focal infection elsewhere in the body. Cultures made from excised blood vessels in deep tubes of glucose brain broth did not show any growth in two cases.

The onset of the disease is very insidious, usually with a history of cold feet and a gradual development of cyanosis accompanied by tingling and burning in the toes or soles.

The cyanosis is evident when the feet are in a dependent position and when raised above the body blanching occurs. After the pathology has sufficiently advanced intermittent claudication becomes a characteristic symptom. The patient can walk a short distance only because of pain in the feet and legs. A short rest relieves the pain and he can again walk a short distance before pain recurs. After the disease is well developed pain becomes the chief symptom. There is no chronic disease in which pain is such an important factor. It is excruciating and unrelenting, driving the patient almost insane unless controlled by opiates. In many cases morphine in large doses will not bring rest to the patient and he will not lie flat in bed for weeks. One of my patients has fallen asleep from sheer exhaustion while walking about his room. Others have sat in bed for days with the feet and legs drawn up or extended over the bedside. The disease also occurs in the upper extremities but is much more frequent in the lower.

On examination the feet and legs are cyanotic in the dependent position and blanched when raised above the body level. Pulsation in the dorsalis pedis and posterior tibial arteries is absent. Gangrene of one or more toes may be present and perhaps some infection following such gangrene. Lesions of the toes or feet are extremely tender and the patient often shows evidence of intense suffering. In many cases focal infection about the teeth or in the tonsils is found.

The pathology of the disease is that of a true angiitis which involves the intima, media, adventitia and perivascular tissues. This leads to thrombosis followed by organization of the thrombi partially or completely obstructing the vessels. The artery, vein and even the nerve may all be involved in the inflammatory process forming a rigid cord-like structure as a result of the perivascular fibrosis.

The early diagnosis of this condition is of extreme importance because if permitted to progress the arterial obstruction becomes so great that gangrene results. Early cases are frequently mistaken for neuritis, weak foot, metatarsalgia, or arthritis. In the gangrene stage other types of gangrene must be excluded. Any persistent, painful condition of the foot in the middle aged should suggest this disease to the physician's mind.

The prognosis is serious. The great majority of cases progress until amputation is necessary because of gangrene, infection and extreme pain. Its seriousness depends directly upon the degree of blood vessel obstruction. Death rarely results from the disease unless some complication intervenes.

*From the Department of Surgery, University of Kansas.

Patient No.	Nationality	Birthplace	Age	Duration	Length of disability	Amputation
1. R. B.	German-English	Ohio	41	1 1/6 yrs.	1 month	None
2. G. G.	Scotch-Irish	Missouri	36	4 1/2 yrs.	2 years	Double
3. J. W.	1/8 Indian	Texas	48	16 yrs.	4 years	Single
4. A. G.	Irish	Missouri	45	5 yrs.	18 months	Single
5. A. D.	Irish	Texas	38	11 yrs.	17 months	Single
6. W. C.	Scotch-Irish	Missouri	36	3 1/2 yrs.	2 years	Single

The treatment may be divided into surgical and medical. Under the former, ligation of the femoral vein, arteriovenous anastomosis, amputation, and peri-arterial sympathectomy have all received a fair trial. The non-surgical treatments have included the application of heat and cold in various ways, intravenous saline, intravenous sodium citrate, Lock's solution through the duodenal tube, Ringer's solution, typhoid vaccine for pain and alternating hot and cold plunges (blood vessel exercise of Bernheim⁴). Each of these methods of treatment has had its adherents but none has met with universal success as a final treatment except amputation.

DISCUSSION OF CASES

Six cases are here briefly reported in the accompanying table. All of the six presented the typical history, signs and symptoms of thromboangiitis obliterans. They all had definite focal infection in the mouth. Their ages ranged from 36 to 48 years. None of them was a Hebrew. They were all born in the United States (in Missouri, Texas and Ohio). Telford and Stopford⁵ have recently reported four cases in patients of British birth.

The duration of the disease varied from 14 months to 16 years and the period of complete disability varied from 1 month to 4 years with an average of 22 months.

In these cases the duration of the disability represents a real economic problem and has made us wonder if amputation should not be resorted to earlier in this disease. One of our patients, who had very mild symptoms, is doing very well after two and one-half years without any apparent advance in the disease. The other five have had amputations below the knee with sound healing in two cases, re-amputation in one case, and two now have unhealed stumps that will require reamputation. In our advanced cases primary amputation at or above the knee would have been wiser. The Gritti-Stokes amputation has been much used with success by Buerger. It is very desirable to amputate below the knee to give a more useful stump but unless patients are carefully selected failures will frequently result. Brooks⁶ has used intra-arterial injection of sodium

iodide and thus has been able to visualize the caliber of the arteries in the radiograph. This may prove of much value in selecting the lowest point for amputation necessary to afford sound healing.

CONCLUSIONS

1. Six cases of thrombo-angiitis obliterans are here reported in Gentiles.

2. This disease may be classed as a universal disease quite common among Jews and relatively common among Gentiles.

3. All of the cases here reported had definite oral infection.

4. While the etiology is still unknown the strongest evidence is in favor of its being due to an infection.

5. As a part of the treatment of thrombo-angiitis obliterans the early removal of all focal infection is advised.

University of Kansas School of Medicine.

REFERENCES

1. Buerger, Leo. *The Circulatory Disturbances of the Extremities*. W. B. Saunders, 1924.
2. Rabinowitz, H. M. Experiments on the Infectious Origin of Thrombo-angiitis Obliterans and the Isolation of a Specific Organism from the Blood Stream. *Surg., Gynec. and Obst.* 37, 353, September, 1923.
3. Thomas, Henry M. J. Persistent Leukocytosis in the Early Stages of Thrombo-angiitis Obliterans. *Am. Jour. Med. Sci.* 164, 86, January, 1923.
4. Bernheim, B. M. Pain in Threatened and Real Gangrene of the Extremities. Its Relief. *Am. Jour. Med. Sci.* 163, 517, April, 1922.
5. Telford, E. D. & Stopford, J. S. B. Thrombo-angiitis Obliterans. *British Med. Jour.*, 1035, Dec. 6, 1924.
6. Brooks, Barney. Intra-arterial Injection of Sodium Iodide. *Jour. A. M. A.*, 82, 1016, March 29, 1924.

A POSTOPERATIVE GALLBLADDER SYNDROME—ITS RECOGNITION AND CURE

CARYL POTTER, M.D.

ST. JOSEPH, MO.

The relative merits of cholecystectomy and cholecystostomy have been discussed pro and con. The advocates of the former have justified their viewpoint by the assumption that the gallbladder, like a diseased appendix, is a vestigial organ, has no function and when diseased should be removed in practically all cases. The extreme conservatists have ad-

*Read before the St. Joseph Surgical Society and Buchanan County Medical Society.

vocated drainage, justifying their stand by assuming that the normal gallbladder must surely have a function and, even if diseased, that function diminishes only in proportion to the extent of the disease. They also argue that if totally diseased a pathological process that is sufficient to involve the whole gallbladder has extended beyond its limits and involved the ducts, pancreas, liver and duodenum altogether or in any combination. Therefore long continued drainage helps not only to reduce the pathological overload on these contiguous organs but in a great measure removes the infection from the gallbladder itself.

As in many such controversies there is fortunately a large group that takes the common sense middle ground in advocating that the gross pathology ascertained at the time of operation, together with the clinical history and age of the patient should determine whether a cholecystectomy or cholecystostomy should be done.

My experience, which has been confirmed in conversations with many surgeons, has been that a great many cholecystectomies do not do well. The mortality is higher than cholecystostomies and, even if the majority survive, many of them travel a stormy postoperative course. The most prominent of these complications are distension, persistent vomiting, asthenia and a melancholia accompanied by many psychical phenomena indicative of a very grave postoperative toxic overload. Physicians have come to recognize that the gallbladder seems to be an organ more or less disordered in many individuals and have too often been accustomed to place it in the category of the appendix, spleen and other structures, of ill-defined function. Cholecystectomy has been performed so often that it has been readily inferred that no indispensable physiologic activity is ordinarily carried out through the agency of the gallbladder. Its dispensability is shown by the fact that it is entirely missing in some animals. Rous and McMaster, however, have demonstrated that the gallbladder has remarkable ability to concentrate its contents by the withdrawal of water and through such concentration the potential storage capacity of the gallbladder becomes enormously increased. Mann has advanced the very interesting hypothesis that it is part of a mechanism whereby the secretory activity of the liver is correlated with that of the gastro-intestinal tract. He shows that practically all the bile secreted by the liver in the fasting state is stored in the gallbladder by concentration. It therefore appears to him that the function of the gall-

bladder is to stimulate the liver to activity at the time the gastro-intestinal tract is fasting or at rest. These experiments would indicate that, after removal of the gallbladder, the discharge of bile into the duodenum is more or less continuous in all animals. In certain cases in man the rate after a variable period of time may become intermittent while in others it always remains continuous. Under such circumstances the reputed advantage of the correlation of the secretory activity of the liver with the activity of the gastro-intestinal tract through the assumed discharge of the gallbladder is lost.

In the heat of discussions concerning the indications for and against cholecystectomy and the function or non-function of the gallbladder, too much stress has been laid on the absence or presence of the gallbladder and the loss of the function of a removed gallbladder, or the pathology still present in a left-in gallbladder, in trying to explain certain postoperative symptoms which, in my experience, have nothing to do with a definite postoperative syndrome which has often been observed by me and no doubt been confused with gallbladder symptoms. This syndrome has no connection with the gallbladder, liver, ducts or pancreas per se. While it is true that many postoperative symptoms have continued from involvement of the ducts, pancreas and liver or gallbladder after cholecystectomy on the one hand and cholecystostomy on the other, the herein described syndrome not infrequently observed by me has no connection whatever with either and occurs just as often after one procedure as after the other. It may persist in the same degree after both. I had an excellent opportunity to observe one case in which the trouble was primarily gallbladder. The gallbladder was first drained. The syndrome then appeared and was entirely different from the gallbladder syndrome; the gallbladder was removed and the syndrome continued; the patient was then operated upon for adhesions and the syndrome reappeared after a few weeks and was only relieved by the procedure done by me which is the treatment advocated by me for these cases.

In reporting six cases, five of which have been finally relieved, I have had the opportunity to observe three following cholecystectomy, two following cholecystostomy and one following a cholecystostomy, a later cholecystectomy and a still later operation for adhesions.

Symptoms. These usually arise from one month to four years after the gallbladder operation, usually earlier and more pronounced after cholecystectomy. The first

attack often comes after a hearty meal or another hearty meal following about six hours after the first. The patient usually does not take the third full meal because of the distressing colic accompanied by a large amount of gas, nausea and often vomiting. The vomitus contains much food from the first meal. There is a high gastric distension frequently coming on one hour after the first heavy meal and increasing very much after the second. If the patient denies himself food for several hours after the first full meal the symptoms may subside in 12 to 72 hours. If the second heavy meal is taken nausea and vomiting result until the stomach is emptied. So long as the distension persists there is dyspnea and often cardiac distress due to the upward pressure of the distended stomach against the diaphragm. Hiccough is not uncommon. There is no jaundice or clay colored stools to indicate common duct obstruction. Colon irrigations give no relief. Vomiting and belching large quantities of gas are often resorted to by the patient with frequent cessation of symptoms. Gastric lavage gives almost instant relief and is usually returned with large amounts of residual food which may or may not contain varying amounts of bile. Heat and stupes are often beneficial but are unnecessary if the stomach is lavaged. In one thin patient there was visible peristalsis over the stomach. All had severe abdominal cramps simulating volvulus. Having observed this peculiar form of gastric stasis and having had one case under observation for many years after cholecystostomy, cholecystectomy and a third operation for adhesions, it appeared that these symptoms had nothing to do with the gallbladder but were mechanical. X-ray showed a duodenal obstruction with indications that the duodenum was adherent to the region of the liver.

Gross pathology. A duodenum plastered to the left-in gallbladder, gallbladder fossa or liver was found in all cases. Those with the worst symptoms had had cholecystectomy and the duodenum had completely plastered itself to the gallbladder fossa underneath the shelving edge of the liver. The duodenum had formed a kink or knuckle at this site and the pathology varied from adhesions to what amounted to a duodenal volvulus with corresponding aggravated symptoms.

Treatment. Division of adhesions gives no relief. Complete separation of the duodenum from the gallbladder fossa or liver is soon followed by a return of symptoms. Everyone knows how hopeless it is to divide adhesions in the right upper quadrant. They usually recur early. Division of adhesions and cholecystectomy in a patient who has previously

had a cholecystostomy is usually followed by aggravated rather than diminished symptoms because the raw duodenal peritoneal surface soon becomes more firmly plastered against the gallbladder fossa and the stasis is increased. Whether the peritoneum of the liver has been carefully sutured over the gallbladder fossa seems to make no material difference. In handling these cases it occurred to me that nothing that attacked the gallbladder or the adhesions per se could afford any logical relief. If a pyloric stenosis or duodenal stasis from ulcer or adhesions is overcome by gastro-enterostomy, it seemed logical that gastro-enterostomy, thereby re-routing the gastric contents and overcoming the obstruction ought to be definitely indicated here. By doing a posterior gastro-enterostomy in five of these cases they have obtained absolute relief. The adhesions were not divided and, unless a previously left-in gallbladder appeared pathologic, it was not disturbed. By adopting this method in cases presenting the above described syndrome practically all of them can be cured.

Carbry Building.

COMPARATIVE STUDY OF THE WASSERMANN AND KAHN TESTS IN 1400 CASES

From the St. Louis Health Department Laboratories

JOSEPH C. WILLETT, D.V.M.,
ST. LOUIS

In the field of diagnostic laboratory workers there are few who would not welcome any test that would supplant the Wassermann test, if for no other reason than that the test is cumbersome and unwieldy, especially when applied to tests in large numbers. Much has been said as to its reliability, and this element is probably as variable as there are numbers of workers performing the test. The reliability of the Wassermann test is dependent not so much upon the system used or the refinement and technique employed, but upon the familiarity of the individual operator with the phenomena of complement fixation as he observes it in the routine performance of tests. It is accepted as the only practical laboratory diagnostic procedure we have in syphilis after the disappearance of the primary lesions. Negative results with this test cannot be relied upon in primary or latent syphilis. This fact has frequently brought the test into disrepute in the minds of many clinicians. Kolmer's efforts to standardize the test have as yet to meet with general acceptance. The factor of the individual operator enters into the question of work in complement fixation to such an extent that in

all probability Kolmer's test will be conducted by many in such a way that it would be difficult to recognize it as Kolmer's standardized test. This, of course, will defeat the object the author had in view. The solution to the difficulty will be reached only when a test not so cumbersome is devised and is more amenable to standardization. There is no disputing the question that competent serologists can readily adapt themselves to any form of technique that will give the most reliable results, but in the meantime, the individual with mediocre laboratory training will continue to conduct the Wassermann test, and physicians will continue to accept the results on a par, as to their merits, with those of the experienced serologist.

In view of the many defects that can be found in the Wassermann test, it should not be difficult to turn our attention to any test introduced that offers a solution to the perplexing problem.

It will be found upon reviewing the literature on Kahn's modification of the Sachs-Georgi test for syphilis, that there is comparatively close agreement between this test and the Wassermann test.

In this paper there is set forth the comparative results obtained in 1400 blood specimens received in this laboratory. The source of the specimens is varied and frequently accompanied by very little information.

Before this survey of 1400 tests was undertaken, considerable preliminary work was done in order to familiarize the workers with the test, and to develop a reliable technique. The Wassermann test was conducted according to Craig's method, the only variation being in the use of liquid amboceptor in lieu of the amboceptor dried on paper. Both the Wassermann and the Kahn tests were read on a four plus basis. The Kahn test was conducted according to the technique of Kahn, in one of his early publications on this test. The technique will not be given in detail, but such points as are deserving of special stress as to their importance will be mentioned. The antigen as ordinarily prepared for the Wassermann test was found unsatisfactory for the Kahn test. The thorough extraction of the ether soluble lipoids is very essential. In mixing the antigen and saline, a perfect solution must be obtained. A mixture showing the slightest precipitation should be discarded. The mixture should be used very promptly after it is made. If it is permitted to stand for any length of time it should be carefully examined for evidence of precipitation before it is used. The mixture should be tested out on at least three known

negative sera for spontaneous precipitation. These tests should be vigorously agitated for three minutes and immediately examined. An occasional mixture will show a very fine granular precipitate and if this is evident to the unaided eye by transmitted light holding the tube considerably above the level of the eye, the mixture should be discarded.

In order to carry out this test as a matter of routine, it was advisable to adapt it to the standard Wassermann equipment. The standard for this laboratory is the 10 test, 20 tube rack, with a tube measurement of 12x100 mm. In order to give sufficient volume to the test for this size tube, it was found necessary for practical purposes to bring the total volume of the test up to .6 ml., using .5 ml. serum with .1 ml. antigen. This equipment permitted the worker to agitate the specimens collectively after putting in the antigen and entirely eliminated the necessity of shaking individual specimens. Immediately upon the addition of the antigen to the tests, they were vigorously agitated for 3 minutes, then placed in the incubator at 37.5° for 18 hours. At the end of this time the reactions were read.

Table 1 gives the correlation between the two tests. Most of the 81 primary cases were patients reporting to the Health Division Clinic for treatment, and the diagnoses were confirmed by darkfield examinations.

In cases listed as tertiary syphilis and "lues," the attending physicians indicated that most of these cases had received some treatment. However, the information on the subject of treatment is indefinite.

Table 2 shows the number of discrepancies occurring in the 1400 tests; only those tests showing a complete disagreement from negative to four plus are considered as discrepancies. Where a discrepancy occurred the two tests were repeated and in practically every instance the original findings were confirmed.

TABLE 1

Clinical diagnosis.	Wassermann Test.				Kahn Test.			Per cent agreement.
	No. of cases.	Four Plus.	Plus Minus.	Minus.	Four Plus.	Plus Minus.	Minus.	
Primary Lues	81	45	12	24	49	11	21	96
Secondary....	15	13	2	0	14	1	0	100
Tertiary.....	97	45	5	47	53	18	26	80
Lues.....	87	24	19	44	32	14	41	90
No. infor. ma- tion given.	1120	201	109	810	199	97	824	98
Totals....	1400	328	147	925	347	141	912	95

TABLE 2

	K. T. 4 Plus. Wass. Minus.	Wass. 4 Plus. K. T. Minus.
Primary Lues.....	2	1
Secondary Lues.....	0	0
Tertiary Lues.....	15	4
Lues.....	8	1
No information available.....	18	18
Totals.....	43	24

In a total of 1400 examinations there was 95 per cent agreement between the two tests. Of the 6% discrepancies, in 43 cases the Kahn test was positive and Wassermann negative; 24 of this number are accounted for as showing clinical evidence of syphilis; 24 gave a positive Wassermann, negative Kahn. This would indicate that in all probability this test, to a certain extent, will be open to the same criticism as the Wassermann, in failing to react in certain cases of syphilis. However, it is evident in examining Table 1, that in 280 cases of clinical syphilis the Kahn test proved the more sensitive of the two tests. In the small number of secondary cases there was complete agreement. It appears that in the 9% cases diagnosed tertiary syphilis the Kahn test proves considerably more sensitive, giving a higher per cent of positive and partial reactions than does the Wassermann. This corroborates the findings of Levinson and Peterson.

In the 1400 tests there is comparatively close agreement in results with the Kahn test uniformly the more sensitive of the two tests. I wish to acknowledge the cooperation of my assistant, Mr. C. L. Pfau, in this work.

CONCLUSION

1. The test is of unquestioned value in the diagnosis of syphilis.
2. The test should be conducted as a matter of routine on all sera submitted for the diagnosis of syphilis in connection with the Wassermann.
3. The test is probably more sensitive than the Wassermann in latent syphilis.

REFERENCES

1. Sachs and Georgia. Med. Klin 14: 805, 1918.
2. Craig, C. F. The Wassermann Test, Ed. 1, 1921.
3. Kahn, R. L. Arch. Dermat. & Syph. 5: 570, 1922.
4. Levinson, S. A., Peterson, W. F. Journal of Nervous & Mental Diseases 54: 417, No. 1921.

MODERN DEVELOPMENTS IN MEDICAL PRACTICE*

I. J. WOLF, M.D.
KANSAS CITY, MO.

It is an honor to be here and join in the

*Address delivered at the first annual Alfred Benjamin Day at the Jewish Educational Institute, Kansas City, Mo., January 30, 1924.

memorial celebration of the man whose life and deeds have given the inspiration towards the building of this dispensary, which so fittingly bears his name and perpetuates his memory.

Seeing before me this brilliant and representative audience and observing the enthusiasm and determination with which officers, doctors, nurses and all have gone to work to make this splendid undertaking a success, I was wandering backward in my mind and was comparing the present with the past and reflecting on the enormous change which in the last fifteen or twenty years has come over the people in general and over the physicians and medical institutions in particular.

Then, as now, we had with us the poor, the needy, the unfortunate and the afflicted. But what a difference in our attitude towards them and in our treatment of them! Then, as now, men of means and wealth would give, some more willingly, some less so; but there was no organized effort behind it all. It was individual and personal and mostly in form of direct relief.

Then, as now, we physicians gave freely of our time, service, knowledge, and even money for the relief of the poor, suffering from physical ailments and disabilities, but there, too, was no organization behind all these efforts. The causes of the social and economic shortcomings were but too slightly touched, and investigated, with the result that need for relief, physical and economic, never ceased.

But times have changed. Under the inspiring leadership of such a splendid man as Alfred Benjamin, so ably assisted by the constructive genius of Mrs. Cohn and willing help of the directors of this institution, men have changed their conception of what constitutes their obligation toward those who, for some reason or other, could not keep pace with the rest in the onward march of civilization.

What once was done as a matter of charity towards those less fortunate, gradually became to be recognized as a duty which could not, and must not, be shirked, no matter how painful; and this duty gradually came to be looked upon as a privilege, at times eagerly competed for, until today men of means, conscious of the change which marks the relation with their fellow man, no matter how humble and poor and afflicted, actually do regard it as a privilege and as a welcome opportunity to spend some of their superfluous wealth and time towards the relief and the cure and prevention of social and physical ailments. No doubt some of us still do this with the idea of thus gaining for ourselves a front seat in heaven; others give to gain the applause of an

admiring public; many, however, I dare say, give because, by so doing, they experience a feeling of happiness and inward satisfaction and contentment which no act in their lives had given them before.

But nowhere is this change more noticeable than in the way medical relief is dispensed today, and in the way medical and dispensary practice has changed in the last fifteen or twenty years.

In private practice it is the advent of (I might almost call it the mushroom growth of) specialists which has brought about the greatest change in the practice of medicine and in the relation of physician to patients.

Patients are frequently dazzled and hypnotized by specialists whose fees are often as exorbitant as their claims to infallibility. Under their influence it has come to pass that the general practitioner, no matter how competent and able, no matter how cultured and up-to-date, is looked down upon as an antiquated institution. The old family physician, who, if of the right type, has always been fully able to diagnose and successfully take care of ninety per cent of all cases of sickness, who, because of his long association with the various members of a family, and his knowledge of their physical and psychical peculiarities, was best able to advise for or against special treatments and operations which enthusiastic specialists might recommend without reference to general conditions; men who have helped to rear the present generation to be the splendid young men and magnificent young women that they grew to be; men who, for twenty-five years or more have labored, and worried and helped with almost one hundred per cent efficiency; men who have often shared the anxious hours with the parents, watching by night and day over their sick children, waiting for the crisis to come which was to dry their tears and turn their sadness into smiles; men who have sat by the bedside of the parents of the men and women of this generation and have seen the curtain rung down on their lives, their ambitions and disappointments, their joys and their sorrows; these men, the general practitioners, I mean, are now unceremoniously, and with no show of sentiment and gratitude, dropped, to make room for the specialist whose superior knowledge in one limited field is eagerly welcomed as a guarantee against sickness and untimely death.

How so many of us older ones, without these wonderful advantages of specialists, have managed to live and attain a ripe old age is a mystery I shall never be able to solve.

In this connection I cannot help but think

of former President Harding who, when called from his humble home in Marion, Ohio, to the greatest office in the world, the presidency of the United States, did not forget, in the hour of his triumph, his old family physician. He well knew that, as President of the United States, he could command the best medical talent in the world, yet he remembered the faithful, and no doubt efficient, services of his family physician, his kindness, his sense of duty, his service by day and night, and he invited him to share his honors with him. By this act alone President Harding showed the difference between the upstart and one to the manor born, between the truly cultured and noble minded, and those whose apparent polish is but a veneer and a sham.

In hospital and dispensary practice the change from the old order of things to the new is no less noticeable to the initiated. Only specialists are appointed as regular staff members in many of our best hospitals, and it has almost become a crime to be a general practitioner. Men whose brains are often as limited and circumscribed as the field in which they practice, self labeled "specialists" with limited general education and a few months intensive training in one of the quick-baking ovens from which a great many of them are served to us, these are some of the men who fill the important positions in many of our hospitals, and dispensary staffs.

All this has increased the cost of sickness enormously; so much so that it has become a notorious fact that only the very rich and the very poor can really command modern medical and surgical treatment; the rich because they alone can afford to pay for the many special examinations and forms of treatment and operations which today are justly regarded as essential; the very poor because in our municipal hospitals and dispensaries, such as this, all this service is furnished free of charge. Every patient coming here into this institution is given a general examination, has to undergo a number of laboratory tests of his secretions and his excretions; is subjected to a dental survey and to an investigation of his nose and throat and other special organs, to X-ray examinations and treatments of all sorts so that in the end he may justly feel that all has been done that human efforts and medical science at the present day can do. What a difference between now and twenty-five years ago!

Truly, the advent of specialists into medicine, which has come to stay, has proven a blessing in many ways; and if some of us suffer from the change of times because we have not had

the capacity to change with them, it is just one of those many tragedies which man, in his sojourn on earth, experiences.

Looking forward into the future of the practice of medicine I can see, when once the pendulum which now swings with uncertainty hither and thither, comes to a standstill, the family physician, the general practitioner, once more assuming the commanding position that was once his; I see him as a physician of broad culture and learning, of intimate knowledge of the whole subject of medicine, ministering to the physical and mental wants of the members of the family under his care, calling to his aid and assistance, if needed, competent specialists who, with his advice and under his direction, carry out the many delicate, intricate and special measures which no one physician is capable of mastering alone.

Patients need the intimate association with some one physician whom they trust as counselor, guide and friend; and I can see the time when the compensation for his services will be equal to that of the specialist, so that he, too, can take his vacations, and his post-graduate courses, and remain the master consultant he ought to be and retain that standing in the community to which his broad culture, his wide sympathies and his great learning so justly entitle him.

And looking forward to the future of dispensary practice I can see, even as we are trying to do now, the supreme word and central control in the management of all cases in the hands of a great physician of broad and general knowledge and mental equipment, when every patient will be under the care and supervision of one directing head, who will make a general survey and call to his aid such special services as he thinks are needed in that particular case.

I can also see the time come when the doors of all institutions like this will swing wide open for the admittance of that great mass of wage earning and salaried men and women who are now without sufficient means of getting modern medical care. They are not poor enough to take advantage of the facilities of such an institution as this entirely free of charge, nor are they rich enough to be able to afford the services of the many specialists now needed in the management of a case. To make room for this class of patients at a nominal total fee, covering every sort of examination, will be the function of such dispensaries as ours in the near future. (Even now the Research Hospital of this City is planning this experiment.)

But it is not only medical and surgical relief which we propose to dispense in this building in the future; we also propose to disseminate

from it that knowledge among patients without which much that we do would be misunderstood and met with distrust, criticism, and prejudice. Nobody but one who, like myself, has practiced these many years among all classes of people, can fully appreciate the value of knowledge on the part of the patient; the good and friendly feeling it promotes, and the assistance it renders to the physician.

Every patient should know that, before a physician can help intelligently, he must first be able to arrive at a diagnosis; and to do this takes often not only hours, but days of research and thought.

To disseminate this necessary knowledge, popular lectures on medical subjects ought to be given in this building by the members of the staff, with the result that people, when they get sick, have the intelligence to seek the help of an expert and not be attracted by mysterious and untried remedies, and by charlatans who still claim, even at this late date, such a big following. The enormous material success of the famous Abrams Electronic method of diagnosis and treatment, the most colossal as well as the most childish of medical frauds in this day and age, proves that such dissemination of knowledge is a necessity.

By doing this work in this way we can best serve our fellow men and perpetuate the memory of our beloved friend, Alfred Benjamin.

405 Waldheim Building.

LATE CUTANEOUS SYPHILIS IN A TABETIC

GAROLD V. STRYKER, M.D.

ST. LOUIS

REPORT OF CASE

The occurrence of late cutaneous manifestations of syphilis in individuals who have definite symptoms of nerve syphilis is rare.

Fournier was one of the first to observe that nearly all men who had been exposed and had acquired syphilis from certain *femmes du pays*, suffered from the same type of the disease as did the girl. The classical cases of Brosius' seven glass-blowers who had been infected by the same man, all of whom developed neurosyphilis, gives support to the observation. Jeanselme¹ in 1913 observed that in natives of Southern Asia where malignant cutaneous syphilis is so prevalent, one seldom sees tabes or general paresis. Reasoner's² experiments on rabbits tend to show that there are strains of spirochetes which have an affinity for certain tissues. Moore and Kemp³ made a physical, neurological and serological examination of one hundred and thirteen

marital partners of one hundred and eleven syphilitics. Of the sixty spouses of parietic and tabetic persons, two-thirds were syphilitic and of these 57 per cent were neurosyphilitics.

It is conceivable that a person might receive an inoculation of both strains at the same time.

History. O. G. Aged 54, a white male American, presented himself on August 2, 1924, complaining of ulcers on the right thigh. He walked into the office supported by his wife and son. His wife was well and showed no signs of syphilis. There were four children living and well, their ages being, respectively, 22, 24, 26 and 28. The youngest child died of pneumonia a few months after birth. The children were well and apparently normal, all holding responsible positions. There was no history of miscarriage nor of hereditary syphilis in the children. From October, 1905, to June, 1908, the patient had been confined to bed with what was diagnosed as *tabes dorsalis*. No treatment was given and he was told that he could not be cured. After he was able to be about he developed "welts" on the right thigh. These later broke down, forming ulcers. Since that time, over a period of 16 years, he had had a constant succession of ulcers. The old ones healed spontaneously, leaving scars. New ones appeared at the periphery. He suffered with severe lightning pains.

Physical examination. The general appearance of the man marked him as a tabetic. His expression was pinched, his face pale and clammy, his voice high pitched and irritating, his gait typical of a tabetic. He was well developed and well nourished. There was no ptosis of the eyelids, the extrinsic muscles of the eye were normal the pupils were the Argyll Robertson type. His head and neck in other respects were negative. There was no distention of the abdomen and palpation revealed nothing unusual. The external genitalia were normal. There was slight dribbling of urine.

Skin lesions. The right buttock and the posterior and lateral surface of the thigh extending to within a short distance of the knee presented a solid area of scar tissue in which were five superficial "punched out" ulcers. At the edge of the scar tissue along the anterior surface of the thigh were eight typical gummas in all stages of evolution, from the pea-sized subcutaneous tumor to the deeply indurated walnut to egg-sized, purple ulcer. The lesions were painless and discharged a seropurulent fluid. The left extremity was normal.

No patellar, Achilles or cremasteric reflexes could be demonstrated. Sensations over the lower extremities were markedly diminished, especially the sense of pain. The blood Wassermann was positive. Spinal puncture was refused. Venereal history was denied.

Dr. Robert H. Davis, who saw the case with the writer, concurred in the diagnosis.

Treatment. Intramuscular injections of mercuric chloroid, 1/6 grain (0.01 gm.) were given three times a week. The response was rapid. After ten injections, the cutaneous lesions were entirely closed over and the ulcerated areas replaced with scar tissue. At this point the patient passed from our observation.

The literature reviewed contains few references of cases in which late nervous and cutaneous syphilis existed in the same patient. Raymond and Guillian,⁴ 1904, reported a case in a tabetic. Deve,⁵ in 1906, recorded three

cases, all in tabetics, and Daulos and Dervy⁶ reported one in the same year. White,⁷ in 1911, in a statistical study of syphilis, reported the presence of cutaneous syphilis in 3 per cent of five hundred tabetics and one and a fraction per cent of one hundred and seventy-eight parietics. Barthelmy and Brant⁸ reported a case of tertiary syphilis with cutaneous and nervous symptoms. In 1922, Beeson⁹ reported a case with tertiary cutaneous lesions and definite symptoms of *tabes*.

The above case is reported as a contribution to an unsettled question.

1145 Missouri Building.

BIBLIOGRAPHY

1. Jeanselme, E. Discussion, Bull. Soc. Franc. de Derm. et Syph. 1913, Vol. 24, p. 129.
2. Reasoner, M. A. Some Phases of Experimental Syphilis with Special Reference to the Question of Strains. J. A. M. A., 1916, Vol. 67, p. 1799.
3. J. E. Moore and J. E. Kemp. Studies in Familial Neurosyphilis. Arch. of Int. Med., 1923, Vol. 32, p. 464.
4. Raymond, F., and Guillian, G. Cutaneous Syphilitic Manifestations in a Case of *Tabes*. Bull. et Mem. Soc. Med. d'Hop. de Paris, 21, 32:1101, 1904.
5. Deve. Three Cases of Active Syphilis and *Tabes* in *Tabetics*. Rev. Med. de Normandie, 7:393, 1906.
6. Daulos and Dervy. Active Syphilis and *Tabes* in the Same Individual. Bull. Soc. Franc. de Derm. et Syph., 17:484, 1906.
7. C. J. White. Statistical Study of Syphilis. J. A. M. A., Aug. 8, 1914, Vol. 63, No. 6, p. 459.
8. Barthelmy and Grant. A Case of Neurotrophic and Dermatrophic Syphilis. Bull. Soc. Franc. de Derm. et Syph., 7:341, 1921.
9. Beeson, B. B. *Tabes Dorsalis* Plus Tertiary Cutaneous Syphilis. J. A. M. A., 78:1537, May 20, 1922.

PHYSIOLOGIC EFFECT OF MASSAGE

In connection with a study made by Ralph Pemberton, F. A. Cajori and C. Y. Crouter, Philadelphia (*Journal A. M. A.*, Nov. 29, 1924), of arthritis and rheumatoid conditions, analysis has been attempted of some of the measures known to benefit them. Conspicuous among these measures are exercise, the application of external heat and massage. Studies were therefore undertaken on five arthritic patients, sufficiently active and robust to permit of general and severe massage, in respect to the hydrogen-ion concentration, carbon dioxide content, oxygen content, oxygen capacity, percentage oxygen saturation, inorganic phosphorus and lactic acid of the venous blood before and after massage, and also the hourly volume, hydrogen-ion concentration, titratable acid, organic acids and inorganic phosphorus of the urine before and after massage. It is to be noted that massage of voluntary muscles, even though vigorous, is not accompanied by the evidences of lactic acid production and acidosis, which accompany a relatively mild active exercise of short duration, or by the evidences of loss of acid and alkalosis, which follow exposure of the body to external heat. Massage can be used as a partial substitute for active exercise in many conditions, but its benefit must be due chiefly to some mechanism other than that reflected in the chemical changes accompanying exercise. The available evidence suggests that these benefits are referable to changes in the circulation, especially capillary. The favorable influences on the rheumatic syndrome of exposure to external heat, massage and active exercise apparently find their chief explanation in their influence on the circulation, including the capillary beds. The corollary to this is that a disturbance of the circulation constitutes part of the underlying pathologic change in rheumatic and arthritic conditions.

THE JOURNAL

OF THE

Missouri State Medical Association

MAY, 1925

EDITORIALS

KANSAS CITY IS EXPECTING YOU

All arrangements for the Sixty-Eighth Annual Meeting of the Association have been completed and the members of Jackson County Medical Society are awaiting the opening session of the House of Delegates on Monday, May 4, to extend the open hand of genial host to visitors and their families.

We anticipate the largest gathering in the history of our Association next month as the resources of Kansas City are almost unlimited for making your stay not only pleasant and enjoyable on account of the numerous opportunities for pleasure and recreation but, more apropos for the occasion of our Session, in providing an extensive series of clinics at the General Hospital during the entire Session where you can observe and study almost any condition—medical, surgical or in the special branches.

Our guests for the occasion are Dr. Morris Fishbein, of Chicago, editor of the *Journal of the American Medical Association*, who will deliver an address on "Mirrors of Medicine" at the president's reception, Wednesday night, May 6. Those who have heard Dr. Fishbein are enthusiastic about his talent for entertaining, instructing and stimulating his audiences. He is a prolific writer on medical topics, humorous, serious and just plain argumentative, always bringing home the point of his talk with illuminating brilliance. Don't fail to hear him.

Our other guest is Dr. John M. Dodson, of Chicago, secretary of the Bureau on Health and Public Instruction of the American Medical Association, who will give us the results of his experience in directing public health activities of the American Medical Association, particularly his work on periodic health examinations and the establishment of *Hygeia*. Dr. Dodson has long been a teacher of medicine, both in Rush Medical College, his alma mater, and in the University of Chicago. He is intensely interested in promoting the activities of state medical associations in the work of preventing disease especially through periodic health examinations and encouraging county

and state medical societies to make this work one of their principal activities. Of genial personality and pleasant address he is a man whom you will be glad to know and his visit will profit us.

The clinics will take up the morning of each day of the Session, the papers being read in the afternoons, the public meetings on Tuesday and Wednesday nights.

Don't forget to bring the ladies. Special arrangements are being made for their entertainment and participation in the work of the Woman's Auxiliary.

On another page we publish the complete program of the meeting and also publish the program of the Woman's Auxiliary.

STATE BOARD OF HEALTH REVOKES MORE LICENSES

Last month we related the activities of the state board of health at the trial of licentiates charged with various offenses and cited to show cause why their licenses should not be revoked. As related, the state board of health revoked the license of Dr. Waldo Briggs on March 20, and two others, Dr. Wm. F. Wagner, of St. Louis, and A. J. Lofgreen, of Kirkwood, surrendered their licenses pleading guilty to the charges.

Since that time the board has revoked the licenses of Dr. Hugo L. Baepfer, St. Louis; Dr. Adolph M. Krall, St. Louis; Dr. Anna Goldstein, St. Louis; Dr. Thomas Moore, Maplewood; Dr. O. C. Hanser, St. Louis.

The board exonerated Dr. Walter L. Kelley, of Affton, and Dr. John Buschman, of St. Louis.

The charges against the physicians were falsely swearing to preliminary or medical education or attendance at the St. Louis College of Physicians and Surgeons and other medical schools.

The work of the state board of health in ferreting out proof of the violations of the statute has not been a pleasant undertaking; in fact, it has consumed the time of the president of the board, Dr. Emmett P. North, and the secretary, Dr. James Stewart, for many days, to the exclusion of practically all other duties, and every member of the board who attended the hearings was also absorbed in the work.

The board, and especially the president, deserves the thanks of the entire medical profession and the people of the state for the fearless manner in which they have attacked the problem of revoking the licenses of persons found guilty of fraud in securing those licenses. It was not plain sailing for the board by any manner of means for nearly all the holders of these licenses fought desperately

to retain their rights and denied having committed any wrong. The board, nevertheless, feels that it has sufficient grounds upon which to proceed with the trials of the rest of the persons cited and will do so.

As an evidence that physicians throughout the country are interested in the results of the trials before the board, we publish on another page a resolution adopted by the Federation of State Medical Boards of the United States at the annual meeting, held in Chicago, March 10. Also a resolution adopted by the Council of the St. Louis Medical Society.

These evidences of appreciation on the part of organized medical bodies in the home state of the board and of the representative body of the nation dealing with medical licensure will, we are sure, lend encouragement to the board of health in continuing its efforts to prevent unworthy and untrained persons from practicing medicine in Missouri.

MEDICAL BILL ABANDONED IN THE LEGISLATURE

Senate Bill No. 83, to strengthen the medical practice law and give the state board of health larger powers in the control and licensure of physicians and the prosecution of illegal practitioners, was allowed to die on the calendar with the close of the session on April 9. The bill could have been passed had we been willing to accept amendments exempting Christian Scientists, chiropractors and osteopaths from the provisions of the law. Such a concession would have created a condition in medical practice far more detrimental to public health than now exists. The officers and committees of the Missouri State Medical Association in charge of the bill refused to make any such concession and when they found it was impossible to muster the seventy-six votes necessary to pass the bill in the House of Representatives without these amendments they allowed the bill to die.

The bill passed the Senate in its original form, that body declining to accept any of the amendments, by the unanimous vote of twenty-eight Senators present when the roll was called.

The chiropractor bill passed the House of Representatives, as usual. While variously amended it was nevertheless a vicious measure and died on the calendar in the Senate.

WORK OF THE MISSOURI STATE BOARD OF HEALTH APPROVED

At the annual meeting of the Federation of State Medical Boards of the United States, held at Chicago, March 10, 1925, Dr. F. C.

Waite, of Cleveland, Fellow of the Federation, presented an interesting account of the campaign now being carried on by the Missouri State Board to bring about an improvement in licensure conditions in that state. After Dr. Waite's talk, Dr. A. T. McCormack, of Kentucky, moved the following, which was adopted:

"WHEREAS, The Missouri State Board is waging a strenuous campaign in its endeavors to clear the state of diploma mills and improve the standards of medical licensure, under very trying conditions, be it

Resolved, That the Federation of State Medical Boards of the United States in annual session assembled expresses its unqualified encouragement and support to the members of the Missouri State Board."

The work of the board was also commended by the Council of the St. Louis Medical Society on April 8 by the adoption of the following resolutions:

"WHEREAS, Dr. Emmett P. North, a member and former president of the St. Louis Medical Society, now President of the Missouri State Board of Health, which board has assiduously and persistently during many months endeavored to rid the state of persons and medical schools involved in the medical diploma mill scandal; and

WHEREAS, The Board has revoked the licenses of several physicians found guilty of trafficking in the sale of medical diplomas; and

WHEREAS, The Board has cited some sixty physicians to show cause why their licenses should not be revoked, therefore be it

Resolved, That the Council of the St. Louis Medical Society fully realizes that Dr. North has sacrificed his time and personal interests during all the months of the investigation by the board and has directed the activities of the board in a fearless, courageous and capable manner; and be it further

Resolved, That the Council hereby extends its earnest commendations to Dr. North and to the Board of Health for the work they have done in the fight to rid the state of undesirable and unqualified persons in the medical profession."

ANNUAL BANQUET OF THE JACKSON COUNTY MEDICAL SOCIETY

On April 7 the Jackson County Medical Society held its seventh annual banquet at the Bellerive Hotel, Kansas City. This annual banquet takes the place of the regular meeting of the society for that night and former presidents and members in practice more

than fifty years are the guests of honor. At the meeting on April 7 one hundred and ninety-eight members were present. There were five honored guests, physicians who have been in practice more than fifty years, namely: Dr. John R. Snell, Dr. C. A. Dannaker, Dr. Wm. C. Morris, Dr. Chas. W. Burrill, Dr. Chas. P. Cathcart. Nineteen of the former presidents were also present and seated among the guests of honor. The out of town guest who was honored as the special guest of the occasion was Dr. Wm. Engelbach, of St. Louis, who delivered an address on "Studies in Hair Growth and Pigmentation." When introducing the guests who have spent fifty years or more in the practice of medicine the president, Dr. Chas. C. Dennie, said: "To have lived half a century is of no consequence. To have served humanity faithfully, compassionately and unselfishly, as a citizen, friend, physician, and confidant for such a length of time is the consummation of a life of supreme usefulness."

Of the special guest, Dr. Engelbach, we note the following comment from the *Bulletin* of the Jackson County Medical Society: "Dr. Engelbach has so many friends and admirers here that his visits are more of a homecoming ovation rather than that of a guest."

The annual banquet of the society is always an inspiring occasion and promotes the active and enthusiastic interest of the members in the work of the organization.

In commenting upon the banquet the Kansas City *Post* pays a tribute to scientific medicine and the five physicians who have spent half a century in practice. We quote:

Medical science has advanced wonderfully since fifty years ago when the five veteran members of the profession, who were honored at a dinner of the Jackson County Medical Association Tuesday night, first entered general practice. They are entitled to places on Kansas City's medical roll of honor. They enjoy this public esteem as they enjoy places of confidence in the lives of hundreds of individuals.

Fifty years in the practice of medicine! It is almost a lifetime, and the changes they have seen wrought in their own profession alone would have been astounding if predicted in 1875. Those were the days of the general practitioner, who rode in the saddle or drove by horse and buggy for miles and at any time of the day or night to visit his patients. Specialists were all but unknown in the hinterland, and those who held forth in the great cities did not, in most cases and with the single exception of the surgeons, possess much greater knowledge or skill than the general practitioner.

Some old country doctors made mistakes. Some held to the theory that all children must have certain contagious diseases. They prescribed the vilest of drugs from limited stocks.

But the mistakes were natural, made because the profession had not yet acquired the information needed or because it had not seeped through into the rural communities. The country doctor was an honorable and oftentimes picturesque figure, doing

the right thing as he saw it and doing it courageously. He was the father of the modern physician, and Kansas City is pleased to honor the five men who began their practice in the heyday of his activity and continued it unto the day when medicine is one of the most complex and complete of the sciences, and no man professes to know it all.

OPPORTUNITIES FOR GRADUATE MEDICAL STUDY IN NEW YORK

The Committee on Medical Education of the New York Academy of Medicine has prepared a series of synopses of approved opportunities for graduate medical study in New York City which will soon be published for distribution. The synopses cover dermatology and syphilology, obstetrics and gynecology, internal medicine, neurology and psychiatry, ophthalmology, oto-laryngology, pediatrics, surgery, urology and orthopedic surgery.

A Bureau of Clinical Information is maintained at the Academy of Medicine, 17 West 43d street, where detailed information is available regarding opportunities for graduate medical study in New York, and also in other cities of the United States and abroad. The executive secretary in charge of the bureau is prepared to answer inquiries concerning ordinary internships, special internships or residencies, graduate courses in medical schools and teaching hospitals, and extension courses. Much information in regard to graduate medical work in England and on the Continent is on file.

The bureau publishes a daily bulletin of surgical clinics which will be mailed free to visiting doctors on request. A weekly bulletin of medical clinics also is published. A book of the fixed clinics of Greater New York, with a transportation guide, has been prepared for the use of visitors whose stay in the city is limited, and is furnished without charge.

NEWS NOTES

The authorities of Cornell University have made a requirement that all students admitted to the university, beginning with the fall of 1925, must be vaccinated against smallpox.

The hospital committee of the Vernon County Medical Society reported at the meeting of the society held March 12, that the petitions asking for a special election to provide a tax for the erection and maintenance of a county hospital had been signed by more than one hundred freeholders. The court took the petition under advisement.

Dr. George Clark Mosher was the principal guest at the joint meeting of the Wayne County Medical Society, Detroit, Michigan, and the Detroit Obstetrical and Gynecological Society, April 6, and delivered an address on "Progress in Maternal Welfare."

The next examination conducted by the American Board of Otolaryngology will be held at the Ambassador Hotel, Atlantic City, on Tuesday, May 26, 9:00 a. m. Application blanks may be obtained from Dr. H. W. Loeb, Secretary, 1402 South Grand Boulevard, St. Louis, Missouri.

Dr. Richard L. Sutton, of Kansas City, Professor of Dermatology, University of Kansas, has been made a Fellow of the Royal Society of Edinburgh. Dr. Sutton was given the honorary degree of Doctor of Laws by the University of Missouri in 1922 and recently headed a scientific expedition to Africa under the auspices of the Department of Natural History of that institution.

The Kansas City Clinical Society announces acceptances by distinguished physicians throughout the country to speak at the Fall Clinical Conference in Kansas City, October 5, 6, 7, 8. Those who have accepted invitations to date are: Drs. W. J. Mayo, Rochester, Minn.; Alexander Lambert, New York City; Chas. F. Hoover, Cleveland; Roy B. Canfield, Ann Arbor, Mich.; Russell A. Hibbs, New York City; Orial W. George, Boston, Mass.; B. S. Barringer, New York City.

The St. Louis Medical College class of 1890 held its annual reunion on Friday, March 13, as the guests of Dr. David Nowlin, at Montgomery City, Missouri. The "boys" of thirty-five years ago entered into the spirit of the occasion with youthful enthusiasm in the atmosphere of genial hospitality of the host and Mrs. Nowlin. Those present were: Gerhard Taphorn, of Alton, Ill.; Henry L. Banks, of Hannibal, Mo.; Charles Christian, of Fulton, Mo.; and from St. Louis came a complete delegation, namely, Albert H. Hamel, John S. Kimbrough, Wm. J. Gundelach, Henry J. Schlagenhauf and John C. Falk.

Members who expect to take part in the golf tournament at Kansas City during the Annual Session are requested to send their names to Dr. A. J. Welch, 835 Rialto Building, Kansas City. Dr. Welch is anxious to receive these names before the meeting convenes so that arrangements may be made for assigning the members to various places in the tournament.

The Jackson County Medical Golf Association sent to every golf club in the state a letter requesting that physician members in good standing be informed of the tournament and invited to attend the meeting at Kansas City. The tournament will take place on Thursday, May 7. In the evening of the same day there will be a golf dinner.

Academy of Medicine, Monday afternoon, February 2, 1925. Dr. Lewis A. Conner, the President, reviewed briefly the progress of the development of the Association and commented on the need for such an organization and the wide spread interest which its formation had developed. Dr. Haven Emerson, Chairman of the Committee on Membership, described the methods employed to reach all parts of the United States and Canada; regional agents covering one or more states have been appointed and already 37 states are represented in the membership of the Association. One of the first and most important steps in the development of the organization of the Association is that of securing contacts with all parts of the United States and Canada. This is to be accomplished by appointing regional representatives and obtaining a large and widely distributed membership.

Changes in the personnel of the medical staffs of the state hospitals were announced by the state eleemosynary board as follows: Dr. Porter E. Williams, superintendent of State Hospital No. 2, at St. Joseph, resigned about three months ago. The board accepted his resignation on March 27, and transferred Dr. J. H. Parker from the superintendency of State Hospital No. 4, at Farmington, to the superintendency of the St. Joseph hospital. Dr. E. F. Hctor, who has been superintendent of State Hospital No. 3, at Nevada, for some time, was transferred to the superintendency of State Hospital No. 4, at Farmington, and Dr. J. W. Bruton, superintendent of the State Sanatorium at Mt. Vernon, was transferred to the superintendency of State Hospital No. 3, at Nevada. Dr. S. M. Weltmer, assistant physician at the State Sanatorium, has been appointed acting superintendent of the Sanatorium.

The United States Civil Service Commission announces open competitive examination for Junior Medical Officer, Assistant Medical Officer, Associate Medical Officer, Medical Officer, Senior Medical Officer. Applications for the positions will be rated as received until June 30. The examinations are to fill vacancies in various branches of the government

service, at entrance salaries ranging from \$1,860 to \$5,200 a year. Applicants for these positions must have been graduated from a medical school of recognized standing, and, in addition, have had certain specified experience or postgraduate study. It is provided, however, that applicants for the position of junior medical officer who are senior students in a medical college, may be admitted to the examination subject to their submitting proof of actual graduation within six months from the date of making oath to the application. The need is for eligibles who are qualified in the various specialties of medicine and surgery; there is no great need at this time for those who are qualified in general medicine or surgery. Competitors will not be required to report for examination at any place, but will be rated on their education, training, and experience. Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the board of U. S. civil-service examiners at the postoffice or custom-house in any city.

One million children of this country were born deficient and 35 per cent of the normal born were deficient when they became of age, according to a survey just completed by the Child Health Association. America's annual doctor bill is approximately \$1,400,000,000, according to Hoover. For health work only \$60,000,000 is spent each year through federal, state and municipal agencies. In other words twenty-five times as much is spent for cures as for prevention. A greater sum is spent annually for chewing gum than for safeguarding the health of children. Backed by an annual budget of \$500,000, the Child Health Association has conducted a survey in eighty-six cities between 20,000 and 70,000 population. The results demonstrate why we had such a deficiency in health standards of the men when they were called to national service in the World War.

According to news dispatches from Washington, Secretary of Commerce Hoover announced that May 1 had been set aside by the President in behalf of the children of the United States. On that day the attention of the nation was directed to its child health problems and methods of their solution. Mr. Hoover is president of the American Child Health Association and speaking in that capacity he said the objectives of the health demonstration are:

"That there shall be no child in America that has not been born under the proper conditions; that does not live in hygienic sur-

roundings; that ever suffers from under-nutrition; that does not have prompt and efficient medical attention and inspection; that does not receive instruction in the elements of hygiene and good health."

One of the remarkable characters in medicine of this generation is Dr. Eliza M. Mosher, of Brooklyn, New York, who on March 25, was given a dinner at the Hotel Roosevelt, New York, by her friends in the profession. The general committee included 200 names of the most distinguished educators, physicians and welfare workers in America. Dr. Stephen Pilcher, editor of *Annals of Surgery*, presided. Senator Royal Copeland, of New York, was one of the orators. President McCracken, of Vassar College, Dr. George E. Vincent, President of the Rockefeller Foundation, President Nicholas Murray Butler, of Columbia College, Rev. Newell Dwight Hillis, Dr. George Clark Mosher, Dr. Robert T. Morris, Rev. S. Parkes Cadman, Dr. James R. Angell, Dr. S. Josephine Baker and Prof. Jno. E. Raycroft, of Princeton, were among the speakers.

Dr. Mosher for 20 years was Dean of Women at Ann Arbor, and for 20 years professor of physiology at Vassar College; since that time she has practiced medicine in Brooklyn. She is one of the founders and editors of the *Woman's Medical Journal*, and a frequent contributor to medical literature.

An author of numerous books on medical subjects unusually devoted to women and problems of girlhood, she has taken part in many undertakings both in America and abroad, at medical and sociological organizations.

At present, at the age of 79, she is chairman of a Committee on Clean Brooklyn for the Brooklyn Chamber of Commerce, and other civic associations.

Few women in the history of medicine have been accorded such an ovation as this tribute to a half century of good work for humanity on the part of Dr. Eliza M. Mosher.

The following have been accepted for New and Nonofficial Remedies:

Abbott Laboratories: Butesin Picrate Dusting Powder.

Eli Lilly and Co.: Iletin (Insulin-Lilly) U-80, 10 C.c.

H. K. Mulford Co.: Rabies Vaccine (Phenol Killed)—Mulford.

Parke, Davis and Co.: Desiccated Parathyroid Diagnostic Gland—P. D. and Co., Lentil Protein Extract Diagnostic—P. D. and Co., Friedlander Bacillus Protein Extract Diagnostic—P. D. and Co., Micrococcus Tetragenus Protein Extract Diagnostic—P. D. and

Co., Streptococcus Hemolytic Protein Extract Diagnostic—P. D. and Co., Streptococcus Non-Hemolytic Protein Extract Diagnostic—P. D. and Co., Paratyphoid A, Protein Extract Diagnostic—P. D. and Co., Paratyphoid B, Protein Extract Diagnostic—P. D. and Co., Pine Pollen Protein Extract Diagnostic—P. D. and Co., Apricot Protein Extract Diagnostic—P. D. and Co., Yellow Daisy Pollen Protein Diagnostic—P. D. and Co., Ox-Eye Daisy Pollen Protein Diagnostic—P. D. and Co., and Oak Pollen Protein Extracts Diagnostic—P. D. and Co.

E. R. Squibb and Sons: Insulin—Squibb, 40 Units, 5 C.c., Bean (Kidney) Allergens—Squibb—Cauliflower Allergens—Squibb, Frog's Legs Allergens—Squibb, Daisy Pollen Allergens—Squibb, Bacillus Acne Allergens—Squibb, Bacillus Friedlander Allergens—Squibb.

Swan-Myers Co.: Timothy Pollen Extract—Swan-Myers.

OBITUARY

CHARLES ELLERETTHE POWERS, M.D.

The Bates County Medical Society was much grieved at the untimely death of one of its active and respected members, Dr. Charles E. Powers.

Dr. Powers was graduated from the Ensworth Medical College, St. Joseph, in 1897. He was well versed in medicine, active in the profession and loyal to the various medical organizations to which he belonged. He was charitable to the detriment of himself and his family, many times taking charity patients into his home where they were welcome to stay until restored to good health.

WHEREAS, The Bates County Medical Society has lost an active member and the city and community a useful and broadminded citizen, therefore be it

Resolved, That we extend our heartfelt sympathy to the bereaved wife and brother and other relatives of the deceased, and be it further

Resolved, That copies of these resolutions be sent to each member of the family of the deceased and that a copy be spread upon the minutes of this meeting and also that a copy be sent to the *Journal of the Missouri State Medical Association*.

T. F. LOCKWOOD, M.D.,

JOHN S. NEWLON, M.D.,

GEORGE H. THIELE, M.D.,

Committee on Necrology.

CHARLES ANDERSON POPE DUNNAVANT, M.D.

The following resolutions were adopted by the St. Louis County Medical Society on the death of Dr. Charles Anderson Pope Dunnavant:

"Doctor Charles Anderson Pope Dunnavant went to his reward on January 30, 1925. The doctor, whom we will all miss very deeply, was born in Jefferson County, Missouri, April 19, 1855, and was graduated from the St. Louis Medical School (now Washington University School of Medicine), March 8, 1882. He was married to Mary L. Orchard, November 26, 1884.

After five years of practice in Koeltztown, he located in Kirkwood in 1889, where he resided and practiced his chosen profession until his death.

The doctor was a charter member of the St. Louis County Medical Society and had served the society as its president and in other official capacities and was one of the most regular attendants. Therefore, be it

Resolved, That the widow has lost a kind, loving and faithful husband; the society a loyal and faithful supporter; the community a staunch and useful friend, and the sick a friend to whom they could look with assurance in times of affliction, knowing full well that in Doctor Dunnavant they always had a ready, painstaking and cheerful response. Be it further

Resolved, That a copy of these resolutions be sent to the widow of the deceased; to the Kirkwood papers; to the *Watchman Advocate* and to the *Journal of the Missouri State Medical Association*, and that a copy be spread on the minutes of our society."

W. H. TOWNSEND, M.D.,

L. W. CAPE, M.D.,

P. M. BROSSARD, M.D.

Committee.

CARUTHERS A. ANTHONY, M.D.

Death has again invaded our ranks and taken from our midst another friend and brother who for the past forty-two years had been actively engaged in his profession doing all that was possible for him to do in the alleviation of suffering humanity and in speaking words of comfort to those who were bowed in sorrow.

Dr. Caruthers A. Anthony died at his home in Fredericktown, March 1, 1925, after a year's illness, of valvular heart trouble, aged 66 years. After his graduation in medicine from the Missouri Medical College (now

Washington University Medical School), in May, 1882, he located at Greenville where he remained for one year. From there he went to Mine LaMotte where he spent seven years in active work and in 1890 opened an office in Fredericktown where he became one of the leading physicians of the county.

Dr. Anthony always measured up to the highest standard of the medical profession and as a citizen was always found in the front ranks of any movement that was for the betterment of the community in which he lived. He was always ethical and to meet him in council in the sick room was a pleasure. The writer has, on various occasions, called for his assistance at the lonely hours of midnight and it was always a source of pleasure to hear his reply, "I'll be there right away, Doctor."

Dr. Anthony was a member of the Madison County, Southeast Missouri and Missouri State Medical Associations and always assisted in every way possible for the upbuilding of the medical profession. He was conscious of the fact that there was no cure for his ailment and at all times displayed great courage, fortitude and patience. He was wholly resigned to his fate and frequently said to his closest friends that the Lord had been good and kind to him in that He had spared him to practice his profession for forty-two long years. Without complaint he quietly drew the drapery of his couch about him and anxiously awaited the summons from Him who doeth all things well. Willing and loving hands labored early and late to prolong his stay on earth with us but it was of no avail for the Great Physician called and he hurried on his last call to that land eternal from whence no traveler has ever returned.

Peace be to his ashes.

W. HARRY BARRON, M.D., Secretary,
Madison County Medical Society.

WILLIAM BURTON REYNOLDS, M.D.

It is with profound sorrow that the Bates County Medical Society is called upon to draft resolutions on the untimely death of our beloved member and colleague, Dr. William Burton Reynolds, of Prairie City, Missouri.

Dr. Reynolds died July 14, 1924, at the age of 48 years, in a hospital at St. Joseph, Missouri, following an operation for appendicitis. Dr. Reynolds was graduated from the Ensworth Medical College, St. Joseph, 1901, and located at Prairie City where he became established as a kind, sympathetic and energetic medical man. No physician stood higher in the profession nor commanded greater respect among his clientele than did Dr. Reynolds. A more

beautiful monument could not have been erected to the memory of him than the good name based upon the sterling character manifested in his life.

The river of life, as its broadening current swept the banks of human joy, hope and professional anticipation, too soon broke into a mighty torrent rushing over the rapids of medical adversities, difficulties and disappointments carrying with it disease and desolation. Dr. Reynolds succumbed to the inevitable which he had many times in practice labored so long and late to ward off and mitigate in others. All pain, sorrow and tribulations in the life of this good man have been engulfed within the waters of the eternal sea.

WHEREAS, The messenger of death has called from among us a true and tried physician, a loyal and enthusiastic member of this society, a willing and efficient worker for the happiness and welfare of the community at large, therefore be it

Resolved, That, in token of the high esteem in which Dr. Reynolds was held by the medical fraternity, a copy of these resolutions be published in the *Journal of the Missouri State Medical Association*, and also a copy furnished the sorrowing family with the assurance that every member of this society extends a heartfelt sympathy in their sad bereavement.

THOS. F. LOCKWOOD, M.D.,

JOHN S. NEWLON, M.D.,

GEORGE H. THIELE, M.D.,

Committee on Necrology.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, FOR 1925

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID THE STATE ASSESSMENT FOR ALL
THEIR MEMBERS)

Benton County Medical Society, October 10, 1924.

Chariton County Medical Society, December 20, 1924.

Camden County Medical Society, December 29, 1924.

Madison County Medical Society, January 21, 1925.

Montgomery County Medical Society, January 22, 1925.

Clark County Medical Society, January 30, 1925.

Cape Girardeau County Medical Society, February 10, 1925.

Dent County Medical Society, February 19, 1925.

Webster County Medical Society, February 26, 1925.

Ste. Genevieve County Medical Society, March 24, 1925.

Ralls County Medical Society, April 2, 1925.

Caldwell County Medical Society, April 4, 1925.

Taney County Medical Society, April 6, 1925.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

One Hundred and Tenth Meeting, February 9, 1925

1. PRESENTATION OF CASES.

A. A CASE OF BRAIN ABSCESS WITH MENINGITIS.—By DR. ERNEST SACHS.

S. W. J. Male, age 20 years. Admitted to B. H. with history of having had sore throat on 11-3-24. Two days later right ear began to discharge, pus culture showed streptococcus. Fifteen days later marked tenderness over the mastoid and mastoidectomy was performed on the rt. side. Left hospital ninth postoperative day.

On the seventeenth postoperative day patient complained bitterly of eyes; vomited and appeared toxic. Lumbar puncture was done and showed 77 cells. Eye grounds showed beginning choking of discs and patient was advised to come to the hospital.

On admission on December 18, 1924, patient had temperature of 37.6 C. pulse 99, respirations 18. Rt. pupil was larger than left and there was marked bilateral choked disc and an Oppenheim on the rt. Lumbar puncture was done and showed 56 cells, 26 polymorphonuclears and 30 lymphocytes. Eye fields showed a left homonymous hemianopsia.

Five days after admission patient showed a patellar and ankle clonus on the left, left facial weakness, and an Oppenheim on the right. Taken to operating room and brain abscess in right temporal lobe, 5 cm. beneath the surface, was drained.

Following day, the patellar and ankle clonus on the left had disappeared; Oppenheim on the right, however, persisted.

Two days later temperature was 40.2 C, pulse 120, respirations 20. Had a sudden severe headache, became comatose. Lumbar puncture was done and showed 5800 polymorphonuclears. Culture of spinal fluid showed hemolytic streptococcus. Spinal drainage was done in the lumbar region. Two days later received 30 c. c. of 1 per cent mercurochrome intravenously. Following day temperature was 37.4. Blood culture at this time was negative.

Five days later, received another intravenous injection of mercurochrome. Following day temperature rose to 40.5, pulse 140, respirations 28. Patient was taken to operating room and a cisterna drainage was done. Next evening temperature was normal. Seven days later drain from the cisterna was removed.

1-19-25, two days after removal of the drain in the cisterna, spinal drain was removed.

Next morning temperature rose to 40 C, pulse 130, and respirations 28. Spinal drain was replaced and temperature dropped to 37.

2-1-25 drain in brain abscess and from spine removed.

2-4-25 wound in scalp healed, cisterna wound and spinal wound healed. Was up on January 30 and walked on February 1. Eye fields at this time normal. Choked disc had disappeared.

I would like to draw attention to one more thing that was observed in this boy, namely, that though he had a large abscess in the right temporal lobe, an Oppenheim reflex was found on the same side as the lesion. Usually the Babinski and the Oppenheim are found together, but in the last few months we have seen several cases in which there was an Oppenheim on the side of the lesion and a Babinski on the opposite side. I have wondered whether possibly the Oppenheim was produced by a lesion of the direct pyramidal tract and the Babinski by a lesion of the crossed pyramidal tract. We usually

have considered these two reflexes the same and that they were merely elicited in different ways.

B. A CASE OF PNEUMONIA WITH DISPLACEMENT OF THE HEART AND MEDIASTINUM TOWARD THE AFFECTED SIDE.—By DR. L. A. SMITH.

C. A CASE OF EPIDEMIC ENCEPHALITIS.—By DR. A. D. CARR.

D. A CASE OF ENDOTHELIOMA.—By DR. R. M. KLEMMME.

J. O. S., Male, age 61 years. Admitted December 23, 1924, with history of having had a blow on the head six months previous to this time. Three months later noticed a swelling on vertex to right of mid-line. No pain associated with this swelling. One month later noticed left foot dragged and felt numb.

On 10-23-24 patient entered one of the local hospitals for treatment of so-called neuritis of left leg. Received heat, massage, and exercise for over three weeks without any improvement. November 23, 1924, under local anesthesia, an effort was made to remove a so-called sebaceous cyst from the top of the head. Wound, however, was closed without anything being done.

On admission to B. H., patient showed the following signs: Pulsating mass, 5x3 cm., on vertex. Vessels in temporal region prominent, more marked on the left. Left eye ground showed tortuous vessels and blurring of disc. There was weakness of left arm and limitation of motion. Abdominal reflex absent on left. Left leg flaccid. K.K.'s and A. J.'s absent, right and left. Hypalgesia to pin prick on left chest and left arm. Also an area corresponding to 5th, 4th and 3rd sacral segments.

12-27-24, under local anesthesia, large endothelioma, weighing 192 grams, was removed from vertex by Dr. Sachs. Tumor lay over the longitudinal sinus between the hemispheres and to remove tumor it was necessary to remove the longitudinal sinus with part of the falx. In so doing, the large veins to the motor area on both sides were ligated with silver clips. Patient stood operation very well. Given blood transfusion and left operating room in good condition.

12-28-24, right arm was spastic and knee jerks and ankle jerks were present in both right and left legs. The following day there was a tendency to katatonic condition of the right arm but both legs and left arm were paralyzed.

12-30-24, on stimulating legs with pin, patient would draw up legs. From this time on, until about the 20th of January, 1925, patient had no voluntary movements in legs, there was loss of muscle tone, and left arm was paralyzed.

On January 20, 1925, patient showed return of power and motion in right leg and motion of fingers in left hand. This gradually improved until patient on February 2, 1925, could move wrist, pronate and supinate wrist, and could flex his arm on his humerus. Five days later there was definite motion in biceps and triceps and patient could contract his pectoralis major on left. Following day, he was able to extend his left leg at hip and knee and two days later could extend and flex left leg at hip and knee. The right leg is now normal and there is daily improvement in power of both left arm and leg. The patient should make a good recovery.

DISCUSSION

DR. SACHS: One point of interest is the length of time which Dr. Klemme has mentioned. The circulation in the cortex must have returned very

promptly. It was four weeks before he began to move his biceps, and then longer before he began to move his fingers.

This case presents a picture seen frequently during the war, in a longitudinal sinus injury, where a bullet wound was received over the middle of the head, causing a thrombosis of the sinus and patients had bilateral symptoms, more severe in the legs, less severe in the arms and forearms, and not at all in the face. This patient shows that picture. In the same way, when he started to recover, the centers farthest removed from the longitudinal sinus recovered first. First the fingers, then the shoulders, then the hip and knee. Judging from the looks so far, I think he will get complete function of the left leg in a few weeks. It is also striking to note the rapidity with which his voluntary movements are returning. Today he can raise his arm in salute; four days ago he could not even move the biceps. (Here is the photograph that shows a very characteristic picture of endothelioma with a large (lesion) mass on the head. Another photo shows the lateral view.)

E. A CASE OF ABDOMINAL ANEURYSM WITH LIGATION OF THE AORTA.—By GEORGE S. JOHNSON.

W. S.—A negro man aged 59 was sent in from the out patient department Jan. 23, 1925 with diagnosis of abdominal aneurism.

His chief complaints were weakness and an abdominal tumor.

He had gonorrhoea at 20 with inguinal adenitis. He denies having had syphilis.

The immediate onset of the present illness was in December, 1923, when he began to have marked weakness in his legs with the slightest exertion. His lower extremities also got cold very easily, especially the left. In February, 1924, he quit work on account of increasing weakness, shortness of breath, dizzy spells, a sense of fullness in the epigastrium, and a constant dull ache in the small of his back, and he noticed a lump in his left lower abdomen about the size of a base ball. He remembers that the mass was freely movable and throbbed whenever he exerted himself or became excited. The mass grew fairly rapidly until the latter part of March or first part of April, 1924, and then became stationary. The symptoms grew worse until the time of admission to the hospital, and he developed tingling sensations and pain in his lower extremities on exertion, especially on the left. He had transient edema of the feet and ankles for the 6 months previous to admission.

The heart was slightly enlarged to the left; no murmurs. Abdominal examination showed in the mid-line extending from about 4 cm. below the xiphoid to about 3 cm. above the symphysis a smooth ovoid mass, visibly pulsating, and definitely expansile. There was slight edema of the left lower leg and foot. The knee jerks and ankle jerks were not obtained. There was a definite diminution to temperature pain and touch along the medial half of the left thigh and leg and along the medial aspect of the lower leg.

The blood Wassermann was 4 plus. The blood counts were within normal limits. The hemoglobin was 72 per cent. The total P. S. P. excretion in 2 hours was 60 per cent.

On Feb. 2, the abdominal cavity was opened by a mid-line incision, and the aneurysmal tumor was exposed by incision of the posterior parietal peritoneum. A Crile clamp was placed on the aorta just above the sac. Dissection of the sac was difficult because of dense adhesions. In freeing the adherent vena cava the sac was torn. The blood gushed from the sac with considerable force in spite of the

fact that the proximal aorta was occluded with the Crile clamp. The hemorrhage was controlled and the sac was closed with silk sutures. The aorta was then ligated between the clamp and the sac with two ligatures of fascia lata supported by ligatures of braided silk.

Two hours after operation both legs and feet were very cold and a determination of the temperature of the lower extremities by the thermo-couple showed marked diminution in circulation. Twenty-eight hours after the operation the feet were warm and the temperature determination showed comparatively little deficiency.

The postoperative course was uneventful until the 4th day when the patient developed definite signs of pneumonia in the left chest. These signs and symptoms have gradually lessened and the patient is now apparently entering upon an uneventful convalescence.

DISCUSSION

DR. BARNEY BROOKS: This case presents several points of interest. Before operation there was a large aneurysmal tumor occupying the lower half of the abdomen. At operation the aneurysm was found to be of the terminal aorta including apparently both common iliac arteries. The abdominal aorta was occluded by application of a Crile clamp at the level of the origin of the inferior mesenteric artery. Following this occlusion pulsation stopped in the aneurysm, but it did not become soft. An attempt was then made to liberate the aneurysmal sac, but in this attempt the sac was ruptured and smart bleeding ensued. A rupture in the sac was, however, closed without dangerous loss of blood. It was then apparent that the only possible procedure to be carried out was ligation of the abdominal aorta. The aorta was ligated twice. It was ligated just distal to the origin of the inferior mesenteric artery with a strip of fascia. A second ligature of heavy, braided silk was then tied tightly at the beginning of the aneurysm dilatation. The patient was examined two and a half hours after operation and no evidence of circulation in the feet was found. Twenty-four hours after operation, however, there was definite evidence of blood circulation in the feet. This patient has, therefore, successfully survived the immediate consequences of a ligature of the abdominal aorta.

It is not to be understood, however, that this operation is as yet to be considered successful. The aneurysm has at present tremendously decreased in size and pulsation has ceased. The patient has been relieved of all pain. It is possible, however, that this patient may die ten days or two weeks after operation from a cutting through of the silk ligature about the aorta, in which case the patient would probably die of hemorrhage. It is possible, however, for the ligature to cut through completely into the lumen of the aorta without actual rupture of this vessel, in which case there would be a re-establishment of the aneurysmal tumor. The aneurysmal tumor may also recur when the collateral circulation has further improved. It is, therefore, being considered if it is advisable to perform a second operation in the course of two or three weeks in which the aneurysmal sac should be excised. The abdominal aorta has been previously successfully ligated in a few instances. I know of only one case, however, which has remained well for more than a year. This case has been very recently reported by Dr. Rudolph Matas.

2. A STUDY OF CELL STIMULATION, CANCER AND VITAMINS.—By DRs. MONTROSE T. BURROWS AND LOUIS H. JORSTAD.

The conditions allowing a growth of body cells in the tissue culture have been studied. In a simple normal body fluid such as the plasma of the blood of a normal individual single cells cannot grow. Growth can intervene only where many cells are crowded together in a small amount of stagnant medium so that a normal product of their oxidation reaction can be made to remain about them and accumulate to a certain concentration. This substance formed by all cells cannot be retained by the cell. It is readily washed away by circulating blood. This substance has been called the *archusia*. Cells can be made to grow by adding this *archusia* to the medium as by allowing it to accumulate from the cells, which are to be made later to grow by it. *Archusia* extracted from other stagnant cell masses is as effective as that formed by the cell itself. The independent growth in cancer is the result of the fact that cancerous tissue is a dense mass of cells poor in blood vessels. It is a tissue which can form a large quantity of *archusia* on account of its densely cellular content and this remains because of its poor circulation or no ready means for it to escape.

In applying these laws to the normal organism it was noticed that many tissues even in late embryonic life have too active a circulation and too few cells per unit capillary area for them to grow. The growth of these tissues must obtain, therefore, through the blood obtaining *archusia* for them from other sources. We have sought a supply of this *archusia* in the food and in the glands of internal secretion. We have found that many non-pathogenic as well as pathogenic bacteria form an *archusia* which acts readily to stimulate the cells of the body to grow. When these bacteria are fed the body grows actively. They act as vitamin B. The organism with its active circulation undoubtedly survives not because of an ability for its cells to grow independently such is possible only in cancer, but by preying on lower growing forms for a part of their growth energy. The bacteria particularly studied were the *B. tumefaciens* and *B. campestris*. See also article by Burrows, M.T., 1925, Proc. Soc. Exp. Biol. Med., Vol. XXII, p. 241.

3. THE OVARIAN HORMONE AS A CELL STIMULANT.—By Drs. MONT-ROSE T. BURROWS AND CHARLES G. JOHNSTON.

In this paper we have studied the action of the ovary as a stimulus for the growth of body cells. The extracts containing *archusia* stimulate the cells of the body to digest fats and proteins and grow. We find that mazola oil injected under the skin of rats remains as such for an indefinite period. It is not used by the cells under normal conditions. In other experiments the Allen-Doisy Hormone was added to the oil injected. The cells invade these oil droplets, digest them and grow with great activity until all the oil has been removed. It has been known for a long time that the ovary has a definite effect on the fat metabolism of the organism. By these experiments it has been not only possible to give direct evidence for the manner in which it acts in this capacity, but to demonstrate also a source of growth stimulus in this internal secreting gland.

4. THE CESAREAN SCAR.—By Drs. OTTO H. SCHWARZ AND RICHARD PADDOCK.

We have always felt that the healing of the Cesarean scar is no different than the healing of a wound elsewhere. We have always felt that the condition is more or less analogous to the healing of the intestinal wound. However, in the study of the late Cesarean scar, on account of the fact that

the scar is imperceptible in many instances, it has been mentioned repeatedly that healing has taken place by muscle regeneration.

As we were aware of no experimental work on this subject we felt perhaps we could demonstrate by experiments on the pregnant guinea pig at term just what takes place in the healing of these wounds under the existing conditions. We were therefore, able to study in a series of experiments, sixteen in number, different stages of healing to definitely show that the wound in the guinea pig uterus after Cesarean section heals by the formation of scar tissue. We were able therefore, to come to the following conclusions.

CONCLUSIONS

The edges of the wound are held together by the early proliferation of fibroblasts along with capillaries, not only along the line of incision but also very definitely between the muscle bundles adjacent to this line. A definite scar tissue develops and this can be clearly demonstrated in uteri from twelve to twenty-five days after the incision. In our case of twelve days after incision this was quite considerable. In the later stages, for example our case of ten weeks, the line of scar tissue formation with its ramifications is so contracted that on histological examination it is difficult to make out, and it assumes very definitely the normal pattern of an uninjured uterine wall. That muscle regeneration plays no conspicuous part in the final picture should be emphasized from the fact that the very laborious studies of Loeb and his co-workers show that mitotic figures are rarely found in the uterus of the guinea pig seven days after delivery, and rarely after eleven days when the uterus is injured. This means, in our opinion, that muscle regeneration, if it is to play a conspicuous part in the disappearance of these scars, must do it early. It is quite evident from our sections that this is not the case.

DISCUSSION

DR. BURROWS: I am very much interested in this paper. I will ask Dr. Schwarz the origin of the cells in these uterine scars. The cells forming them show all the characteristics of connective tissue cells. It must be pointed out, however, that smooth muscle cells brought into contact with an exudate may act exactly as connective tissue cells. This does not mean that they have been transformed into connective tissue cells, however. Whether those muscle cells are to contract or to form a scar depends on their environment. It is possible to make them form a scar or contract in a tissue culture. It is interesting to note that fibroblasts cannot be made to contract. They can only form a scar tissue. The Van Gieson stain does not differentiate muscle cells from any other cell. It becomes important only in differentiating extracellular white fibrils from the protoplasm of any cell. It has no value in determining whether the cell is a muscle cell or fibroblast. The literature contains many such statements in regard to this stain. They have no value whatsoever. I can see no evidence in this paper of Dr. Schwartz which would indicate that the smooth muscle cells of the uterus are not the ones concerned in the formation of the scars.

DR. SCHWARTZ: We term these cells fibroblasts for the simple reason that they occurred in between the muscle bundles and along the line of incision. That they were definitely fibroblasts was shown clearly by the fact that they stained a deep red with Van Gieson stain. As to their possible origin from muscle tissue, I do not know how they can be differentiated, that is, whether they are fibroblasts from pre-existing connective tissue or fibroblasts of muscle origin. Further, as the fibro-

blast is the most prominent cell in wound healing elsewhere, it is logical to assume that they are necessarily of connective tissue origin. Furthermore, we saw no evidences of muscle regeneration elsewhere, and groups of new-formed cells always appear in the areas of connective tissue matrix.

BATES COUNTY MEDICAL SOCIETY

The Bates County Medical Society held its regular monthly meeting at the courthouse in Butler, on Thursday, March 26, at 1:30 p. m.

There were present: Drs. T. B. Todd, E. E. Robinson, and G. C. Bates, of Adrian, Dr. Claude Allen, of Rich Hill, and Drs. T. F. Lockwood, J. S. Newlon, T. W. Foster, E. N. Chastain, and George H. Thiele, of Butler, and Dr. Herbert A. Rhoades, of Foster, all regular members of this society. Drs. E. A. Dulin, E. F. Hctor, E. H. Heibner and J. T. Hornback, of Nevada, and Dr. A. G. Althen, of Sheldon, were visitors from the Vernon County Society, and Drs. T. W. Adair, of Archie, and J. S. Triplett, of Harrisonville, from the Cass County Society.

The meeting was opened by the president, Dr. Herbert A. Rhoades. The minutes of the preceding meeting were read and approved. The committee on resolutions then presented the resolution in memorandum of Dr. William Burton Reynolds and Dr. Charles E. Powers who died during 1924. The resolutions were passed and a copy of each ordered to be sent to the relatives of the deceased, and to The Missouri State Medical Journal, and to be spread upon the minutes of the Bates County Society.

The meeting proper was then opened with the introduction of Dr. Frank D. Dickson, of Kansas City, who presented a wonderful orthopedic clinic. He presented four cases of cerebral spastic paralysis, each case typical of a different phase of the disease. Following these cases he presented one case each of infantile paralysis, weak back, and dislocation of the semilunar cartilages of both knees. Dr. Dickson's clinic was enjoyed immensely and was of extreme value to those present. He laid particular stress upon the fact that the time to begin treating cerebral spastic paralysis is immediately after the birth of the child.

The next clinic was one by Dr. Robert C. Davis, of Kansas City, on general medical cases. He very ably discussed two heart cases, a case of pernicious anemia in which the differential diagnosis involved tabes, and a case of angina pectoris. Doctor Davis concluded his clinic with the differential diagnosis between thickened pleura and hydrothorax.

Following Dr. Davis' clinic, Dr. O. Jason Dixon, of Kansas City, presented a case of unilateral nerve deafness stressing the fact that the history of the case was the chief thing of value in the diagnosis. He then very thoroughly stressed the importance of recognizing the appearance of meningitis, sinus thrombosis, and brain abscess following disease of the ear. He emphasized particularly the importance which apparently minor symptoms play in enabling one to arrive at a diagnosis of each of the three conditions.

Each of these clinics led to very helpful discussions and the Bates County Society is extremely thankful to Doctors Dickson, Davis and Dixon for the wonderful clinics presented.

No further business appearing the meeting was adjourned.

GEORGE H. THIELE, M.D., Secretary.

CALDWELL COUNTY MEDICAL SOCIETY

The Caldwell County Medical Society met in Kingston, March 26, at 2:00 p. m. Those present were: Drs. G. S. Dowell, president; Tinsley Brown, secretary; H. H. Patterson, M. L. Clint, J. E. Gartside, W. S. Shouse, W. L. Chaffin, C. H. Wilbur. The minutes of the meeting at Polo, November 20, were read and approved.

Dr. Wm. L. Chaffin, of Breckenridge, a former member of our society but who for some time has resided elsewhere, made request for membership by regular application. On motion he was unanimously elected.

The matter of the right physicians to prescribe alcohol to patients was discussed as the County Court has gone on record to refuse all permits for either physicians or druggists.

This society goes on record agreeing that the promiscuous prescribing of alcohol should not be approved but when properly used is a remedy of value, and, in accordance, petitions the County Court to reconsider its previous action, a copy of the petition to be sent to said court and one retained in the minute book of this society.

The society adjourned to meet in Hamilton at the regular monthly meeting in April.

TINSLEY BROWN, M.D., Secretary.

CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society held its regular quarterly meeting in the circuit court room of the county courthouse, Harrisonville, Thursday afternoon, March 12. The meeting was called to order by the president, Dr. H. A. Brierly, of Peculiar. Attention was first given to the general business of the society, then a general discussion of cases presented by members.

Dr. W. F. Chaffin, of Raymore, opened the discussion on the subject of the County Public Health Unit. The advantages, the cost of maintenance, the benefits derived by the patients, education of the general public regarding health, and the relation to the general practitioner were discussed. Informal reports of cases were given by all the members present: Dr. Brierly, of Peculiar, Dr. J. S. Triplett, of Harrisonville, Dr. B. L. Phillips, of Drexel, Dr. B. B. Tout, of Archie, Dr. M. P. Overholser, of Harrisonville, and Dr. W. L. Veirs, of Pleasant Hill.

Dr. Phillips, of Drexel, invited the society to meet with him at Drexel in the near future, with the additional promise of a good meal to follow the meeting. A motion was made and passed by the society to thank Dr. Phillips for his kind invitation, with the understanding that it would be taken up for future consideration.

W. L. VEIRS, M.D., Secretary.

GENTRY COUNTY MEDICAL SOCIETY

The society met at the office of Dr. Whiteley on January 20, with the following members present: Drs. W. S. Campbell, W. T. Martin, J. N. Barger, Frank Rose, E. M. Lucke, G. W. Whiteley, all of Albany; A. W. Paulett, King City, and C. N. Williamson, Gentry.

Dr. W. S. Campbell, president, called the meeting to order.

Dr. A. W. Paulett was elected president for the year 1925; Dr. W. T. Martin, vice-president; Dr. G. W. Whiteley, secretary and treasurer.

Dr. Frank Rose handed in his transfer card from the Jackson County Medical Society and it was accepted by unanimous vote.

Dr. E. M. Lucke's name was placed before the society and he was unanimously elected to membership.

Dr. T. E. Graham and Dr. G. W. Smith, Albany, were elected honorary members.

The secretary was asked to write to the county representative and the senator in regard to the proposed amendments to the practice act for the regulation of the practice of medicine and surgery in the state.

Meeting of February 17

The Society met on February 17. The president not being present Dr. W. T. Martin took the chair.

Dr. W. T. Martin was elected Delegate to the State Meeting in May at Kansas City; Dr. J. A. Crockett, alternate.

Dr. J. N. Barger, Dr. J. A. Crockett, and Dr. C. N. Williamson were appointed censors for the year 1925.

Dr. Frank Rose and Dr. C. N. Williamson were appointed to send greetings to the Ladies' Auxiliary and urge that we have a combined meeting with refreshments.

A draft of by-laws was presented and was unanimously adopted by sections. It was ordered that the by-laws be printed or typed and a copy sent to the state Journal with the secretary's minutes of the meeting.

Next meeting to be held at Stanberry.

G. W. WHITLEY, M.D., Secretary.

JASPER COUNTY MEDICAL SOCIETY

The Jasper County Medical Society held its seventh meeting for the year 1925 at the Joplin Y. M. C. A., Tuesday, February 24, the president, Dr. McGaughey, in the chair. Members present: Drs. Waggoner, Moody, L. C. Chenoweth, Gregg, Hornback, Lanyon, Hoshaw, Lowdermilk, Stormont, W. B. Post, W. Post, Morgan, McGaughey, Shelton, Balsley, Tyree.

The application for transfer of Charles T. Reid, of Cherokee County, Kansas, was acted upon favorably. The application for membership by transfer of Roy E. Meyers, of Newton County, Mo., was acted upon favorably. The application for transfer of Warren B. Chapman, of Newton County, was referred to the board of censors.

Drs. Gregg, Lanyon, and Tyree reported cases.

Meeting of March 10

The Jasper County Medical Society held its 8th meeting for the year 1925 Tuesday, March 10, at the Joplin Y. M. C. A., president McGaughey in the chair. Members present: Drs. L. C. Chenoweth, Hatcher, Clinton, Thornton, W. Post, Reid, Hornback, Lowdermilk, Baxter, Lanyon, Hoshaw, Stormont, Warren, Shelton, Gentry, Mack, Myers, Barson, McGaughey, Marchbank, Snyder, Gregg, Neff, Dickerson, Alberty, Morgan, Tyree.

Dr. Marchbank, of Pittsburg, Kans., read a very interesting paper on "Diabetes Insipidus" and gave the case reports of seven patients that he had treated for diabetes insipidus. The paper was discussed by Drs. Clinton, L. C. Chenoweth, Hatcher and Tyree.

Dr. W. B. Chapman's application for membership by transfer from the Newton County Medical So-

ciety was acted upon favorably on the recommendation of the board of censors.

JAMES I. TYREE, M.D., Secretary.

LAWRENCE-STONE COUNTY MEDICAL SOCIETY

The Lawrence-Stone County Medical Society met in regular session, March 3, 2:00 p. m., at the Aurora city hall. The meeting was called to order by the chairman, Dr. R. D. Cowan. Members present were: Drs. D. C. Adams, J. P. Andrews, P. A. Holmes, H. L. Kerr, T. D. Miller, C. W. Shelton, J. W. Smith and F. S. Stevenson. Visitors: Drs. Leslie R. Webb and Roseberry, of Springfield, Lester, of Marionville, and Weltmer, of the State Sanatorium, Mt. Vernon. The minutes of previous meeting were read and approved.

In the regular order of business resolutions were approved urging such public health and medical legislative measures pending as sponsored by the Public Health and Legislative Committees, particularly the medical practice bill, the bill for the suppression of prostitution, and the defeat of the bill restricting the rights of physicians in prescribing alcoholics.

The secretary was instructed to investigate the status of aged (honor) members in regard to paying state dues.

The application of Dr. F. W. Lester, of Marionville, was received and approved.

Society votes to call next meeting at 1:00 p. m. instead of 2:00 p. m., giving more time for the program.

The names of those members who are to be on the programs of the coming meetings for the year are alphabetically arranged and called. Each member thus called will further be notified by letter in time to announce his subject.

In taking up the scientific work Dr. Leslie R. Webb, of Springfield, gave a paper on acute nephritis, going into details of etiology diagnosis and treatment in an instructive manner.

In discussion, Dr. Weltmer, of Mt. Vernon, who has had opportunities for special observation in epileptics, stated that in event of a failure to void urine during an epileptic seizure, acute nephritis should be suspected, and this class of cases is generally caused by infection from the colon bacillus.

Dr. Kerr thinks well of calomel in the treatment, and Dr. Smith stresses the significance of gastric disturbances.

Dr. Stevenson reminds us of the importance of rest, diet, hot packs with tr. valerian and morph. in the event of convulsions.

Dr. Weltmer, who was formerly with the Home for the Feeble Minded, gave a talk on the importance of finding the normal mind in children, going into detail as to detection and classification, urging the general practitioner and the profession as a whole to take more interest in this work.

In the discussion, Dr. Miller expressed the opinion that defective mentality is mostly inherited, and that restrictive legislation as to the proper mental status for marriage would give best results.

Dr. P. A. Holmes doubts the ability of the physician as a general or family practitioner, to elicit information concerning a mentally defective child without offending its parents.

Dr. Weltmer in closing stressed the fact that this is a work that should be done by the profession.

Drs. Andrews and Miller had papers to present but owing to the lateness of the hour they will be delivered at the next meeting.

Society adjourned to meet June 2, 1925.

T. T. O'DELL, M.D., Secretary.

MISSOURI STATE MEDICAL ASSOCIATION
68TH ANNUAL MEETING

The 68th Annual Meeting of the Association convenes at Kansas City, Tuesday, Wednesday and Thursday, May 5, 6, and 7. The House of Delegates will convene Monday, May 4, and hold its first session when a large part of the business of the Association will be transacted without interfering with the scientific proceedings on the following days. It will be noted that the mornings of Tuesday, Wednesday and Thursday are to be devoted to clinics at the General Hospital. The first session of the House of Delegates, Monday, May 4, will be held in the Grill Room of the Baltimore Hotel, subsequent sessions in the Francis 1 Room. All scientific sessions will be held in the Francis 1 Room. The registration booth and the exhibits will be in the Elizabethan Room and corridors adjacent to the Francis 1 Room. The program follows:

THE COUNCIL

First Meeting—Monday, May 4, 1925—1:00 P. M. Grill Room, Baltimore Hotel

1st District	.....	Austin McMichael, Rockport
2nd District	.....	H. S. Conrad, St. Joseph
3rd District	.....	A. H. Vandivert, Bethany
4th District	.....	Geo. M. Bristow, Princeton
5th District	.....	J. R. Bridges, Kahoka
6th District	.....	J. W. Martin, Kirksville
7th District	.....	T. J. Downing, New London
8th District	.....	B. P. Wentker, St. Charles
9th District	.....	A. R. McComas, Sturgeon
10th District	.....	D. A. Barnhart, Huntsville
11th District	.....	G. W. Hawkins, Salisbury
12th District	.....	Spence Redman, Platte City
13th District	.....	Geo. E. Bellows, Kansas City
14th District	.....	C. T. Ryland, Lexington
15th District	.....	L. J. Schofield, Warrensburg
16th District	.....	T. B. M. Craig, Nevada
17th District	.....	Guy Titsworth, Sedalia
18th District	.....	J. P. Burke, California
19th District	.....	C. F. Enloe, Jefferson City
20th District	.....	W. H. Vogt, St. Louis
21st District	.....	Thos. F. Estel, Altenburg
22nd District	.....	*H. L. Reid, Charleston
23rd District	.....	T. J. Rigdon, Kennett
24th District	.....	T. W. Cotton, Van Buren
25th District	.....	R. W. Gay, Ironton
26th District	.....	W. H. Breuer, St. James
27th District	.....	J. C. B. Davis, Willow Springs
28th District	.....	A. L. Anderson, Springfield
29th District	.....	R. L. Wills, Neosho

*Deceased

Second Meeting—Wednesday, May 6, 1925. After House of Delegates
Adjourns. Francis 1 Room, Baltimore Hotel

DELEGATES

County	Delegate	Address
Adair	J. S. Gashwiler	Novinger
Atchison		
Audrain	J. Frank Harrison	Mexico
Barry	S. W. Chandler	Cassville
Barton	T. H. Duckett	Milford
Bates	T. W. Foster	Butler
Benton	E. L. Rhodes	Lincoln
Boone	J. E. Thornton	Columbia
Buchanan	{ H. W. Carle..... } { C. H. Wallace..... }	{ St. Joseph
Butler	W. S. Bailey	Poplar Bluff
Caldwell	Tinsley Brown	Hamilton
Callaway	J. B. McCubbin	Fulton
Camden		
Cape Girardeau	G. W. Vinyard	Jackson
Carroll	O. R. Edmonds	Tina
Carter-Shannon	W. T. Eudy	Eminence

<i>County</i>	<i>Delegate</i>	<i>Address</i>
Cass	T. W. Adair.....	Archie
Chariton	R. M. Fellows.....	Salisbury
Christian	J. C. Young.....	Ozark
Clark	J. R. Bridges.....	Kahoka
Clay	J. H. Rothwell.....	Liberty
Clinton		
Cole		
Cooper		
Crawford	W. J. Parker.....	Steelville
Dade		
Dallas		
Daviess		
Dekalb		
Dent	W. E. Rudd.....	Salem
Dunklin	J. A. Hogue, Jr.....	Holcomb
Franklin	C. F. Briegleb.....	St. Clair
Gasconade-Maries-Osage		
Gentry	W. T. Martin.....	Albany
Greene	{ J. W. Love..... }	Springfield
	{ Lee Cox	
Grundy	E. A. Duffy.....	Trenton
Harrison		
Henry		
Holt	F. E. Hogan.....	Mound City
Howard		
Howell-Oregon	R. E. Hogan.....	West Plains
Iron	R. W. Gay.....	Ironton
	1925	
	John Aull.....	
	N. P. Wood.....	
	G. E. Knappenberger	
	F. I. Ridge.....	
Jackson	1925-26	Kansas City
	G. Wilse Robinson...	
	Harry L. Jones.....	
	Sam E. Roberts.....	
	R. W. Holbrook.....	
	E. F. DeVilbiss.....	
Jasper	A. B. Clark.....	Joplin
Jefferson	N. W. Jarvis.....	Festus
Johnson	E. Y. Pare.....	Leeton
Knox		
Laclede	H. A. Hamilton.....	Lebanon
Lafayette	E. M. Moore.....	Corder
Lawrence-Stone.....	D. C. Adams.....	Aurora
Lewis		
Linn		
Livingston	F. H. Emmons.....	Chillicothe
Macon		
Madison	E. E. Higdon.....	Fredericktown
Marion	Thos. Chowning.....	Hannibal
Mercer		
Miller	G. D. Walker.....	Eldon
Mississippi	A. W. Chapman.....	Charleston
Moniteau		
Monroe		
Montgomery	E. W. Tinsley.....	Montgomery
Morgan		
New Madrid.....	F. A. Elders.....	Moorehouse
Newton		
Nodaway	C. P. Fryer.....	Maryville
Pemiscot	J. W. Johnson.....	Hayti
Perry	Geo. Blaylock.....	Perryville
Pettis	A. J. Campbell.....	Sedalia
Phelps		
Pike	R. L. Andrae.....	Louisiana
Platte	E. R. Hull.....	Camden Point
Polk		
Pulaski	C. Mallette.....	Crocker
Putnam		
Ralls		
Randolph	S. T. Ragan.....	Moberly

County	Delegate	Address
Ray	R. L. Hamilton.....	Richmond
Reynolds	J. R. Pyrtle.....	Centerville
St. Charles	A. P. E. Schulz.....	St. Charles
St. Clair		
St. Francois	L. E. Monroe.....	Bonne Terre
Ste. Genevieve	J. A. Wilkins.....	St. Marys
	1924-1925	
	Roland Hill.....	
	R. E. Schlueter.....	
	Max Starkloff.....	
	R. S. Vitt.....	
	H. S. McKay.....	
	W. C. Gayler.....	
St. Louis City.....	Jno. W. Stewart.....	St. Louis
	Geo. Gellhorn	
	C. F. Pfingsten.....	
	W. P. Elmer	
	1925-1926	
	Fred W. Bailey.....	
	W. W. Graves.....	
	C. E. Burford.....	
	W. H. Vogt.....	
St. Louis County.....	John H. Armstrong....	Kirkwood
Saline		
Schuyler	O. P. Farrington.....	Greentop
Scotland		
Scott	G. S. Cannon.....	Fornfelt
Shelby		
Stoddard	Frank LaRue.....	Dexter
Sullivan		
Taney	Guy B. Mitchell.....	Branson
Texas	Leslie Randall.....	Licking
Vernon	J. M. Dawson.....	Eldorado Springs
Wayne		
Webster	G. C. Plummer.....	Buffalo
Wright-Douglas	E. C. Wittwer.....	Mountain Grove

PROGRAM

HOUSE OF DELEGATES

First Meeting—Monday, May 4, 1925—9:30 A. M. Grill Room,
Baltimore Hotel

- Roll Call.
- Reading of Minutes of Previous Meeting.
- Reading of President's Message and Recommendations.
- Report of Committee on Arrangements.
- Report of Secretary.
- Report of Treasurer.
- Report of Committee on Scientific Work.
- Report of Committee on Health and Public Instruction.
- Report of Defense Committee.
- Report of Committee on Medical Education.
- Report of Committee on Hospitals.
- Report of Committee on Cancer.
- Report of Committee on Vaccination.
- Report of Committee on Blindness.
- Report of Committee on Constitution and By-Laws.
- Appointment of Committee on Nominations.

Recess till 3:00 P. M.

- Report of the Council.
- Report of Reference Committees.
- Reading of Resolutions, Memorials, etc.
- Selection of Place of Next Meeting.
- Miscellaneous Business.

**Second Meeting—Wednesday, May 6, 1925—9:30 A. M.—Francis 1 Room,
Baltimore Hotel**

Reading of Minutes.
Election of President.
Report of Nominating Committee.
Election of Officers.
Unfinished Business.

GENERAL MEETING

Tuesday, May 5, 1925—8:00 A. M. General Hospital, 24th and Cherry Sts.

Clinics:
 Medical
 Surgical
 Specialties

GENERAL MEETING

Tuesday, May 5, 1925—1:30 P. M. Francis 1 Room, Baltimore Hotel

Inguinal Hernia.....R. A. Woolsey, M.D., St. Louis
Symposium on Acute Diseases of the Upper Abdomen:
 Surgical Conditions of Gastric Origin...A. E. Hertzler, M.D., Kansas City
 Surgical Conditions of Pancreatic Origin.....
 E. Lee Miller, M.D., Kansas City
 Surgical Conditions of Hepatic Origin...R. D. Ireland, M.D., Kansas City
 Intrathoracic Lesions Simulating Abdominal Conditions.....
 J. Q. Chambers, M.D., Kansas City
 Incidental Factors in the Treatment of Gastric Ulcer.....
 J. I. Tyree, M.D., Joplin
Steinman Pin Traction in Fracture of Leg...Warren Rainey, M.D., St. Louis
Management of Fracture of the Femur...H. E. Pearse, M.D., Kansas City
 Discussion opened by Dr. C. B. Francisco, Kansas City

GENERAL MEETING

Tuesday, May 5, 1925—8:00 P. M. Francis 1 Room, Baltimore Hotel

Periodic Health Examinations:
 The Plan Endorsed by the American Medical Association.....
 John M. Dodson, M.D., Chicago, Ill.
 Secretary, Bureau of Health and Public In-
 struction, American Medical Association
Cooperation by State and County Medical Societies.....
 Frank I. Ridge, M.D., Kansas City
State Board of Health and Its Relation to the Public.....
 James Stewart, M.D., Jefferson City
 Secretary, State Board of Health
Remedial Laws in Relation to Public Health.....
 J. Henry Caruthers, Jefferson City
 Assistant Attorney General

GENERAL MEETING

**Wednesday, May 6, 1925—8:00 A. M. General Hospital, 24th and
Cherry Sts.**

Clinics:
 Medical
 Surgical
 Specialties

GENERAL MEETING

Wednesday, May 6, 1925—1:30 P. M. Francis 1 Room, Baltimore Hotel

Tryparsamid Therapy in Neurosyphilis. Report of a Case.....
 A. L. Skoog, M.D., Kansas City
Symposium on Goiter:
 Reflections of an Internist on the Thyroid Problem.....
 { C. H. Nielson, M.D., St. Louis
 Geo. W. Wilson, M.D., St. Louis
Surgical Management of the Goiter Patient.....
 H. S. McKay, M.D., St. Louis

Choice of Anesthetic in Thyroid Operations.....	Ellis Fischel, M.D., St. Louis
Pathology of Thyroid Hyperplasia.....	Ralph L. Thompson, M.D., St. Louis
X-Ray and Radium in Goiter.....	E. H. Skinner, M.D., Kansas City
Changes in the Chest Wall in Tuberculosis.....	W. A. German, M.D., Kansas City

GENERAL MEETING

Wednesday, May 6, 1925—8:00 P. M. Francis 1 Room, Baltimore Hotel
President's Reception

President's Address.....	W. A. Clark, M.D., Jefferson City
Mirrors of Medicine.....	Morris Fishbein, M.D., Chicago, Ill.
	Editor, Journal American Medical Association

GENERAL MEETING

Thursday, May 7, 1925—8:00 A. M. General Hospital, 24th and
Cherry Sts.

Clinics:
Medical
Surgical
Specialties

GENERAL MEETING

Thursday, May 7, 1925—1:30 P. M. Francis 1 Room, Baltimore Hotel

Progress in Our Knowledge of the Diseases of the Cardiovascular System in the First Quarter of the Twentieth Century.....	Logan Clendening, M.D., Kansas City
Symposium on Obstetrics:	
Obstetrical Problems.....	W. C. Gayler, M.D., St. Louis
Management of the Nausea and Vomiting of Pregnancy.....	E. C. White, M.D., Kansas City
Conservative Treatment of Eclampsia....	Lee Dorsett, M.D., St. Louis
Tooth Destruction in Pregnancy and Methods of Control.....	Wm. Kerwin, M.D., St. Louis
Indications and Operations for Cesarean Section.....	M. A. Hanna, M.D., Kansas City
Diagnosis and Treatment of Sterility.....	G. D. Royston, M.D., and Otto S. Krebs, M.D., St. Louis

SEVENTEENTH ANNUAL MEETING OF MISSOURI SOCIETY OF MEDICAL SECRETARIES

Kansas City, Wednesday, May 6, 1925—12:15 P. M.
Blue Room, Baltimore Hotel

The Secretaries will meet in the Blue Room, Baltimore Hotel on May 6, promptly at 12:15 and will close promptly at 2:15. Promptly at 12:15 luncheon will be served.

DR. CLAUDE J. HUNT, President.

DR. J. T. HORNBAC, Secretary.

PROGRAM

Address of Welcome.....	Dr. Claude J. Hunt, Kansas City
Address.....	Dr. M. P. Overholser, Harrisonville
Address.....	Dr. Jabez N. Jackson, Kansas City
Election of Officers.	

WOMAN'S AUXILIARY TO THE MISSOURI STATE MEDICAL ASSOCIATION

COMMITTEES

Committee of Arrangements for State Auxiliary.....
Mrs. J. G. Montgomery, Chairman
 Program Committee.....Mrs. E. T. Gibson, Chairman
 Hostess Auxiliary.....Mrs. R. McE. Schauffler, Chairman
 Entertainment Committee, Jackson County Woman's Auxiliary.....
Mrs. Andrew W. McAlester, Chairman

PROGRAM

Tuesday, May 5, 1925—12:00 Noon. Muehlebach Hotel

Luncheon to Executive Board by Jackson County Auxiliary.
 Guest of honor, John M. Dodson, M.D., Chicago, Ill.
 Secretary, Bureau of Health and Public Instruction, American Medical Association

Tuesday, May 5, 1925—2:00 P. M. Muehlebach Hotel

Meeting of the Executive Board of the State Auxiliary

Wednesday, May 6, 1925—10:00 A. M. Muehlebach Hotel

Fundamentals of a State Program of Public Health Work.....
James Stewart, M.D., Jefferson City
 Secretary, State Board of Health and State Health Commissioner
 Child Health Work in Missouri.....I. B. Krause, M.D., Jefferson City
 Director, Division Child Hygiene, State Board of Health
 Organization and Activities of Local Health Departments.....
Jos. W. Mountin, M.D., Jefferson City
 Director, Division of Rural Sanitation, State Board of Health
 The State Health Department Plan for Improving the Milk Supply of
 the State.....Mr. George W. Putnam, Jefferson City
 Director, Division of Sanitary Engineering, State Board of Health

Wednesday, May 6, 1925—12:00 Noon. Muehlebach Hotel

Luncheon. Guests of Honor:
 Morris Fishbein, M.D., Chicago, Ill., Editor, Journal American Medical Association.
 W. A. Clark, M.D., Jefferson City, President, Missouri State Medical Association.

Wednesday, May 6, 1925—2:00 P. M. Muehlebach Hotel

Annual Meeting of State Auxiliary.
 Reports of Officers.
 Reports of Delegates of County Auxiliaries.
 Reports of Chairmen of Committees.
 Election of State Officers.
 Discussion and formulation of plans for coming year.

Thursday, May 7, 1925—10:00 A. M. Muehlebach Hotel

Public Health Education:
 What Health Principles Are Our Rural Schools Teaching?.....
Mr. T. J. Walker, Columbia
 Editor, School and Community
 Why the Country Boy and Girl Needs Us.....
Miss Marian Dunshee, Columbia
 Extension Service, Missouri State University
 This Thing of Public Health Education.....
Herman E. Pearse, M.D., Kansas City
 Chairman, Committee on Health and Public Instruction,
 Missouri State Medical Association

Thursday, May 7, 1925—2:00 P. M.

The Jackson County Auxiliary will entertain all visiting doctors' wives with a drive and a musicale and tea at the Mission Hills Country Club.

Thursday, May 7, 1925—8:00 P. M.

The Jackson County Medical Society will entertain all visiting doctors' wives at a theater party.

COMMERCIAL EXHIBITORS

Elizabethan Room, Baltimore Hotel

A. S. Aloe Company, Surgical Supplies.....St. Louis, Mo.
 Cameron's Surgical Supply Company, Surgical Supplies.....Chicago, Ill.
 Erschell Davis Company, Surgical Supplies.....Kansas City, Mo.
 Deshell Laboratories, Inc., Pharmaceuticals.....Los Angeles, Calif.
 Dick X-ray Company, X-ray and Physiotherapy Equipment...St. Louis, Mo.
 Hanovia Chemical & Manufacturing Company, Scientific and Therapeutic
 Apparatus.....Newark, N. J.
 Hettinger Bros. Mfg. Co., Surgical Supplies.....Kansas City, Mo.
 Horlick's Malted Milk Co., Malted Milk.....Racine, Wis.
 Lederle Antitoxin Laboratories, Antitoxins and Serums...New York, N. Y.
 H. Masters (W. B. Saunders Co.), Medical Publications....St. Louis, Mo.
 Medical Protective Company, Malpractice Insurance....Fort Wayne, Ind.
 Mellin's Food Co., Infant's Diet Materials.....Boston, Mass.
 C. V. Mosby Co., Medical Publishers.....St. Louis, Mo.
 Radium Chemical Company, Radium and Radium Preparations.....
Pittsburgh, Pa.
 W. A. Rosenthal X-ray Co., X-ray and Physiotherapy Equipment....
Kansas City, Mo.
 E. R. Squibb & Sons, Chemical, Pharmaceutical and Biological Products
New York, N. Y.
 Victor X-ray Corp., X-ray and Physiotherapy Equipment....Chicago, Ill.

BOOK REVIEWS

DISEASES OF THE NOSE, THROAT AND EAR. For Practitioners and Students. Edited by A. Logan Turner, M.D., F.R.C.S. Ed. Surgeon-Consultant, Ear and Throat Department, Royal Infirmary, Edinburgh; Senior Lecturer on Diseases of the Ear, Nose, and Throat, University of Edinburgh. With the collaboration of J. S. Fraser, W. T. Gardiner, J. D. Lithgow, G. Ewart Martin and Douglas Guthrie. Cloth. Pp. 413, with 234 illustrations. Price, \$5.50. New York: William Woods and Company, 1924.

The editor and co-workers have given to students and physicians, not specializing, a most useful and useable text.

The work is divided into six sections: I. Diseases of the Nose. II. Infections of the Paranasal Sinuses. III. Pharynx and Nasopharynx. IV. The Larynx. V. Perioral Endoscopy. VI. Diseases of the Ear.

There are two hundred and twenty-two illustrations with twelve plates, of which eight are in colour. The plates vividly reveal various points in diagnosis and pathology of the parts under observation. Throughout the work, pictures explain the text and thereby the student has anatomy, physiology and pathology indelibly imprinted on his memory. Some things that the student and general practitioner do not do are illustrated and described, such as endoscopy, mastoidectomy, etc., but they are so graphically explained and portrayed that the student and general practitioner each can easily understand what should be done, though he turns the work to another who is proficient and experienced.

One can see by going over the book that a man who has been a teacher and has learned by experience just what a student and general practitioner needs to know, has edited this volume. It contains nothing superfluous, is not technical, but is most practical throughout and useful for ready reference.

J. L. M.

MODERN METHODS OF TREATMENT. By Logan Clendening, M.D., Assistant Professor of Medicine, Lecturer on Therapeutics, Medical Department of the University of Kansas. With chapters on special subjects by H. C. Anderson, M.D.; J. B. Cowherd, M.D.; Carl O. Rickter, M.D.; F. C. Neff, M.D.; E. H. Skinner, M.D.; and E. R. DeWeese, M.D. Illustrated. St. Louis. The C. V. Mosby Company, 1924. Price \$9.00.

This book contains a great deal of information for the general practitioner, and it is well balanced in its judgment although somewhat conservative. It may be consulted with profit whenever there is a doubt about some treatment. At the same time there are various omissions of importance. A chapter on local anesthesia would greatly add to the value of the book. Cocain is mentioned but not "novocain" and other newer substitutes. Antipyretic drugs still have their field of usefulness, the author to the contrary notwithstanding. The "Brand Bath" in its original form is hardly in use nowadays.

Vaccine treatment while greatly overdone has come to stay after all. Nonspecific protein therapy while perhaps still in the experimental stage should be treated more fully; the author mentions only typhoid vaccine and horse serum, but not milk injections, casein and a host of other preparations that are largely being used in Europe perhaps more than in this country.

The chapter on "Electro-Therapy" is far too short to be of much value to the general man. Hypnotism is still practiced in France and Germany with great advantage, still the author says: "as a method of therapy it is no longer greatly used, it is unsafe and unsatisfactory." The chapter on "Psychoanalysis" is excellent, clear and concise. The treatment of syphilis with bismuth is not mentioned at all. Aix-la-Chapelle is in Germany, not in France. On page 375 we read: "Marienbad was much like Carlsbad and not far from it." I am not aware of any change in its location since the war, but the fact is Carlsbad has hot springs while Marienbad has cold ones. But after all these are only minor criticisms and the book as a whole can be heartily recommended.

E. S.

ON THE BREAST. By Duncan C. L. Fitzwilliams, C.M.G., M.D., Ch.M., F.R.C.S. Ed. and Eng. Surgeon in Charge of Out-Patients and Lecturer on Operative Surgery to St. Mary's Hospital; Surgeon to Paddington Green Children's Hospital and to Mount Vernon Hospital for Tuberculosis. St. Louis: C. V. Mosby Company. 1924. Price \$10.00.

What's in a title? "On the Breast," is the title of a text book recently issued by Dr. Fitzwilliams. It is a fascinating title and invites to a stimulating degree the perusal of the work.

To those who follow their desires the various chapters in the book offer wholesome food for thought and for study. In the case of almost every organ about which there has been much discussion in medical literature, and there is no doubt that the breast has been one of the most frequently discussed organs of the human body, there comes a time when some individual mister is able to present a description of the development of that organ, its abnormalities, its pathology and the treatment of the diseased conditions so clearly that it is understood by everyone and becomes common knowledge, taking its definite place in the textbooks.

Every physician, be he internist or surgeon, is deeply interested in the breast and its associated lesions. To many, some of the chapters embodied in the book may not offer much that is not already known to them. The work nevertheless is epoch-making in that it crystallizes some of the previous vague conceptions and scattered facts into a definite, clear cut picture.

The book serves to call attention in an admirable chapter to "Abnormalities and Curiosities." The information therein contained is of exceedingly great interest. I venture to say that it would require considerable search and much reading to obtain this information as concisely as it can be found in this volume.

The chapter on "Chronic Interstitial Mastitis," with its splendid case history reports, is an interesting exposition of this vexatious pathology and will be appreciated even by a physician whose fund of knowledge has been filled by great experience.

The treatise on "Tumors, Benignant and Malignant," eliminates much that often proves so trying to the reader. It gives in a clear and concise way the status of facts as they are accepted at the present time. The subject is vitalized by splendidly cited case histories.

Chapter 22 deals with operative procedures. The author states: "There is only one treatment for carcinoma when seen early, and that is the operative removal of the disease, and this rule holds good as long as the disease can be dealt with by the knife." My own experience leads me to agree emphatically with the statement and I regret that the sentence does not appear in heavy type. In the face of much that has been said against operative measures, especially since the advent of the Roentgenray and radium, it requires courage to place such a frank expression in a modern textbook. No physician with the requisite amount of experience from which to draw a conclusion can entertain a feeling different from that of the author. In the present light of our knowledge it is the truth, and poor as the results may seem, it is the best that can be offered at present. The meager progress made however has engendered a strong hope for the future.

In connection with this sentiment a careful reading of Chapter 27, the final chapter of this excellent work, on "X-ray Treatment of Malignant Disease

of the Breast," by G. Harrison Orton, M.D., Radiologist to St. Mary's Hospital, London, will be found very instructive and of the greatest interest.

The production of work of such importance as this one is no small achievement and we congratulate the author on his exhaustive study and admirable style. F. R.

CHRONIC INTESTINAL STASIS (ARBUTHNOT LANE'S DISEASE). A Radiological Study. By Alfred C. Jordan, C.B.E., M.D., M.R.C.P., Corresponding Foreign Member, Belgian Royal Academy of Medicine. Cloth. Price, \$7.50. Pp. 230, with 315 illustrations. New York: Oxford University Press, 1924.

Dr. Jordan has dedicated this book to Sir Arbuthnot Lane, "The Father of Intestinal Stasis." If recollection faileth not, Sir Arbuthnot was also the "Forger of Lane Plates." Calm survey indicates that America has failed to adopt the child and has thrown the plates into the junk-pile. And now after fifteen years, Jordan, who is Lane's radiologic disciple, brings forth this stasis bible. It is a collection of Jordan's papers since 1911, properly vouched and foreworded by Sir Arbuthnot, who dogmatically maintains that the subject of chronic intestinal stasis is "the real foundation of medicine." If this is true the majority of the profession is exhibiting a terrific neglect. How could this miserable fault have escaped the observation of Dr. Martin Arrow-smith?

Jordan ascribes C. I. S. (Chronic Intestinal Stasis) as a causative factor or a manifestation in colitis, diverticulitis, appendicitis, duodenal and gastric ulcer, cardiospasm, joint tuberculosis, cancer of the breast, aortic aneurysm, pulmonary and glandular tuberculosis. Sir Arbuthnot seems to advocate colectomy as a panacea.

A reading of the book does not afford proof of their hypothesis. One cannot agree with the interpretation of many radiographic illustrations.

Undoubtedly, Sir Arbuthnot will appear as an historical figure in the realm of enthusiastic surgery. He will have promoted more thought to the fractures of long bones and the surgery of long colons. Certainly America has failed to appreciate his theories or has failed to apply them properly. Perhaps it's another case of innocuous desuetude. The only voice we have heard raised in his defense in America has been upon the Chautauqua Circuit. E. H. S.

NOUVEAU TRAITÉ DE MÉDECINE. Fascicule XXII. Muscles, Os et Articulations. Publié sous la direction de MM. G. H. Roger, F. Vidal et P. J. Teissier. 1 volume de 560 pages avec 209 figures et 2 planches en couleurs, relié 45 fr. Editeurs, Masson et Cie, 120 Boulevard Sainte Germaine, Paris, France.

This volume of 560 pages treats of the diseases of the muscles, bones and articulations. Each of these groups is treated in a comprehensive way, nothing seeming to be lacking.

As might be expected in an European treatise, rickets receive a particularly exhaustive consideration; also that on chronic rheumatism is fully considered.

All the sections are treated in the same broad way so that one does not realize that he is reading a composite of several authors. The presentation is such that the information presented is of equal interest to practitioners in the various fields of medicine. Those able to read French will find it a veritable storehouse of interesting facts. A. E. H.

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies
Issued Monthly under direction of the Publication Committee

VOLUME XXII

JUNE, 1925

NUMBER 6

E. J. GOODWIN, M. D., EDITOR
901 Missouri Building, St. Louis, Mo.

PUBLICATION } W. H. BREUER, M.D., Chairman
COMMITTEE } C. B. FRANCISCO, M.D.
 } M. A. BLISS, M.D.

ORIGINAL ARTICLES

ESSENTIALS OF A GYNECOLOGICAL EXAMINATION*

RANDALL S. TILLES, M.D.
ST. LOUIS, MO.

The number of gynecological patients who first reach the general practitioner is by far larger than the number of gynecological patients who go directly to the gynecologist. For this reason I feel that the proper outlining of a mode of examination for the general practitioner will be of benefit so that the patient will receive the advantages of a complete examination. Gross pathological lesions are easy of recognition and little will be said upon this subject. The minor complaints due to gynecological pathology are by far the most elusive and are often overlooked by one who does not bend his efforts to that type of investigation. Therefore, I feel that the first examination must be complete in order to bring out any hidden or obscure defects in the pelvic tract and its allied organs. This paper will therefore tend to deal with the routine of a thorough examination the motive of which is a full and correct diagnosis.

As in all work a complete history must be obtained. This must only not include the family and past history of the patient, but a full understanding of the growth of this patient from babyhood. History of the period of the onset of menstruation must be complete in every detail, especially as to the type, regularity, duration and amount of flow. If the history of painful menstruation occurs, particular attention must be paid to the type of dysmenorrhea, gathering facts in all their detail, as many cases of painful menstruation will reveal no definite pathology. Relief, if possible, is often accomplished by a full understanding of the history of the onset, type, character, and duration of pain as observed by the patient. The history of previous preg-

nancies, abortions and labors must be fully obtained, which will tend to explain the cause of trouble or its future occurrence. The knowledge of a postpartum recovery is again essential to explain pathological defects that may exist in this patient.

The second essential for the accomplishment of a complete examination and which is often not complied with must be the disrobing of the patient from the hips upward. Every office should make this possible by having short jackets which open in front so that the patient will not be embarrassed by her nudity. If possible an attendant should be present at the time of every gynecological examination. There must be no interference by underclothing; observation must be direct; palpation must be directly upon the skin surface with nothing between the examining hand and the skin of the patient.

The third essential is for the patient to lie flat upon the table covered with a sheet which can be lowered during the examination of the abdomen; the legs should be straight and not elevated during the course of the abdominal examination, as so often happens in many hospitals when the nurse in attendance knows that a gynecological examination is to be made. With these essentials as a beginning, the examination of the facial appearance, the mouth, teeth, the type and distribution of hair over the temples, chin and lips, must be observed. This may be the first intimation of a probable endocrine disturbance. The condition and size of the thyroid must be noted. An examination of the breasts and a proper understanding of their size, shape, position, etc., including the possibility of a mass, the areola and the formation and type of nipple are of great significance. Working downward, the examination of the chest, looking for gross lesions of the lung and detecting the efficiency of the heart, is of supreme importance. How utterly disappointing a recommendation of a surgical operation would be to a patient, when later this advice must be retracted on account of a cardiac or pulmonary defect that might make a surgical procedure unsafe. This would merely

*Read before the Sixty-Seventh Annual Meeting, Missouri State Medical Association, Springfield, May 6, 7, 8, 1924.

add to the discomfort and nervousness of the patient and would be very embarrassing to the adviser.

Next in order is the appearance of the abdomen, noting the texture of the skin, the amount of fat, scars, striae, the umbilicus, the contour, size and shape, and the type and distribution of hair. Should the hair distribution at this point show resemblance to the male type we have the second intimation from the physical makeup of the patient of an endocrine disturbance.

Palpation of the abdomen is systematically effected by theoretically dividing it into four quadrants, making right and left upper quadrants and right and left lower quadrants. Each quadrant should be carefully and separately palpated and any mass, tenderness or rigidity carefully noted. When the mass, tenderness, or rigidity is present, some relationship should be applied to one of the systems of organs that lie within that particular quadrant. This can be further investigated by laboratory and X-ray examination. If none of these factors are elicited, in all probability there is no gross lesion in that particular quadrant and we are ready to proceed to the next. In the lower quadrants the same search for a mass, tenderness and rigidity, must be carried out and if found or suspected it can be further and more accurately elucidated by a bimanual examination. Examination of the lower quadrants must include palpation of the inguinal and femoral areas for hernia, which are often overlooked in their earlier stages, and the symptoms often attributed to indefinite gynecological conditions which may or may not exist.

From the abdomen we pass to the examination of the external genitals and rectum. At this point the patient is for the first time put into a position suitable for a vaginal examination. Again the arrangement of hair, its type, texture and amount as distributed over the internal surface of the thighs and about the buttocks and rectum should be carefully noted. The external genitals must be examined in detail, the labia majora and minora noted specially for defects and malformations, for acute inflammatory conditions, such as ulcers or irritations caused by discharges that may be existent higher in the genital tract. The character of the discharge, whether bloody, purulent or serous, should be observed. The attendant should be instructed never to cleanse the external genitals for the physicians, as often occurs, as this may remove the evidence that exists and result in its being overlooked. Inspection of the clitoris and its prepuce, its size and character may be the one

point leading to the suspicion of masturbation in a highly neurotic but otherwise normal individual. The urethral orifice is often involved and becomes an important point in a gynecological examination. The discovery of carunculi, eversion, ulcerations, benign or malignant, signs of inflammation and the ear marks of gonorrhea may be present. The hymen or its remains whether intact or torn leads one into the proper paths of reasoning if carefully noted. The vaginal outlet with special attention to its sphincter action or its relaxed condition following tears, is of great importance. If a relaxed condition of the vaginal outlet exists but is not especially marked with the patient lying in the recumbent position, instruction of the patient to close the mouth and bear down, as occurs in defecation, will show if present what is described as a descensus of the anterior or posterior vaginal walls or both. This may not necessarily amount to a definite cystocele or rectocele but in my observations I have found that minor degrees of descensus may cause as much discomfort to some patients as a marked hernia in this region in others. This is one point that must be carefully considered, especially if associated with a descensus of the uterus or with an abnormal position of that organ. The relaxation of the pelvic floor as a whole which may be due to an overstretching or previous laceration of the pelvic muscles and fascia can be determined by inserting two fingers into the lower third of the vagina spreading the fingers and pulling downward; the tone of the levator ani muscle is thereby elicited and the amount of the relaxation of the pelvic floor determined. The definite presence of a rectocele, its degree and its importance can be further understood by inserting a finger into the rectum and pushing it upward and forward towards the vagina, which will show the amount of pouching that exists. A cystocele can also be investigated in the same manner by the insertion of a metal catheter or sound into the bladder and directing it towards the vaginal outlet.

Before proceeding with the bimanual examination I feel that one of the most important steps in a complete gynecological investigation demands the emptying of the bladder per catheter. Catheterization of the female subject is simple and perfectly harmless if carried out in the proper manner. The enlightenment obtained by a catheterization gives definite information as to the presence of a stricture of the urethra, or of tenderness, which speaks for a low grade inflammatory condition. It also shows the capacity of the bladder, the character of the urine whether clear or cloudy, and allows an examination of its sediment for

pus or blood, uncontaminated by vaginal secretions. This knowledge alone may be the means of fixing the complaints of the patient to the urinary tract and give relief even in the presence of normal gynecological findings. A cystoscopic examination may or may not be indicated. Furthermore it is impossible to draw conclusions properly as to the position of the uterus when a full bladder exists. Many diagnoses of a retroversion are spontaneously cured by emptying the bladder. After examination of the outlet, palpation of the vagina reveals much. The elicitation of tenderness in the vagina should be first noted, which speaks for an inflammatory condition of its walls. Also look for the presence of scars or ulcerations. The type of vagina, especially if tubular in its upper half or third, indicates error in the proper development of the genital organs and is often associated with an endocrine disturbance and sterility. A similar condition often exists as a secondary process in senile conditions. The absence of a receptaculum seminis is often associated with an endocrine disturbance and may be another cause for sterility. The presence of tumors or growths of the vaginal wall should be determined and if present a further investigation instituted. The palpation of the ureters is possible in the majority of cases and taken into consideration with the urinary findings obtained from the catheterized urine may reveal the presence of stone or a tuberculosis of the ureters.

Next in order of examination is palpation of the cervix. As in all solid organs within the pelvis its position, size, shape consistency and mobility must be definitely determined. The character of the external os, whether nulliparous or multiparous, gives at times leading information. The character of lacerations of the cervix and their feeling to palpation may be the guiding point between a simple or severe laceration or lead to the detection of an early carcinoma. Tumors of the cervix, benign or malignant, are easily discovered. Eversions or erosions may or may not be detected by the vaginal fingers but can easily be observed including the character of the cervical secretion when examination with the speculum is made later.

Proceeding to the bimanual examination we now for the first time employ both hands to detect what lies within the pelvic cavity. The uterus if forward is grasped between the internal and abdominal hands and, as mentioned above, its position, size, shape, consistency, mobility, tenderness and attachments clearly recorded. Little more need be said about the uterus if the above six points are carefully and

fully understood. Going from the uterus we pass to the adnexal region of either the right or left side. It is always advisable first to examine the side which is least tender or sensitive, for if undue pain is produced the patient becomes either voluntarily or involuntarily resistant and less easy to handle during the remainder of the examination. Ambidextrous palpation, using the right hand for the right pelvis and the left hand for the left pelvis is most desirable. The examination of the adnexal regions includes the palpation of the ovary, the tube and broad ligament of that side. Gross lesions, such as a cyst of the ovary or a large pyosalpinx, are easy of detection and little need be said. In the absence of gross findings where a practically normal tube or no tube is palpated, the interpretation of the amount of tenderness indicates a chronic inflammatory condition. Tenderness on palpation of the culdesac and on movement of the uterus, with a history of a previous inflammatory condition following gonorrhea, labor or abortion, speaks almost positively for an inflammatory process some place in the pelvis. In these cases in spite of negative findings, conservative treatment with heat applied to the pelvis in its various ways will almost surely give relief. Having completed the examination of both adnexal regions, palpation of the culdesac may reveal a great deal, as mentioned above. A low bulging culdesac speaks for a hematocele or abscess. These taken into consideration with other findings will lead to the proper diagnosis. Palpation of the pelvic connective tissue, its pliability, its induration and sensitiveness, including the palpation of the sacro-uterine ligaments, are outstanding points in the diagnosis of cellulitis or parametritis. After examination of the pelvic contents above mentioned, a great deal of information can be gained by the examination of the pelvic wall itself. This should begin with the examination of the symphysis, its height and thickness, noting any irregularity on its posterior surface which might interfere with the normal process of labor. The angle of the public arch and the character of the lateral wall of the pelvis must be taken into consideration. Palpation of the spines of the ischium with due attention paid to their prominence must be noted. One's ability or inability to reach the promontory of the sacrum speaks for or against certain types of flat or contracted pelvis.

Speculum examination. An examination with the speculum is of great importance but in my opinion, at the expense of a more general examination, is often over used. A speculum examination will reveal, in short, the ap-

pearance of the vaginal mucosa, of the cervical mucosa, of tears, eversion and erosions, tumors or malignant disease of the cervix. Further than this little can be gained that is not detected by the palpating finger. A rectal examination is used either in conjunction with a regular vaginal examination or to replace the vaginal examination in virgins, or as an aid in obstetrics. In my opinion, a rectal examination is best carried out by first filling the rectum with about four to six ounces of water from the irrigator, which should be always ready for such examination. The rectum, when water filled, is ballooned out and the finger lies free in the distended rectum and ready for either a manual or bimanual examination. The amount of information gained from a rectal examination is in the majority of cases almost equal to that of the bimanual vaginal examination.

225 University Club Building.

DISCUSSION

DR. LEE DORSETT (St. Louis): I have been very much interested in Doctor Tilles' paper, one impressing me very forcibly being in regard to perineal lacerations. We are often prone to consider a perineum laceration when we have a relaxed perineum. You all know in your own work that you have had deliveries where there were extensive lacerations which you repaired very neatly and when the patient would return for future examinations you would be disappointed in your results. If you analyze these cases you will find that the muscles, due to the force of labor, have been so attenuated that you have had a relaxed perineum. I often have patients come to me with a relaxed vaginal outlet and they have criticized the former physician for not repairing them properly. Probably my patients are going to other men and criticizing me on the same grounds. I have seen a number of cases that have been repaired by men who know how to do a primary perineorrhaphy, but yet the cases have had marked perineal relaxation. There was not a tear, but a separation and stretching of the muscles.

In regard to the diagnostic procedure in certain pelvic conditions, there is a point that ought to be considered and that is the differential diagnosis between right adnexal conditions and acute appendicitis. It is sometimes a very important point to know whether we are to operate for appendicitis, or for an acute salpingitis; here is a chance for a dangerous mistake.

There are a number of things that will help us—temperature, respiration and blood count, but one particularly that will help is, that on pressure upward the cervix will often cause pain in the adnexa that as a rule we do not get in acute appendix. There is also a point brought out by Pollock of the Long Island Medical College in regard to pressure on the cervix resulting in pain in extra-uterine pregnancy; also in cases where there has been intra-abdominal hemorrhage of some standing with a bluish discoloration around the umbilicus.

DR. GEORGE C. MOSHER (Kansas City): I want to commend the Doctor for his paper. I do feel the points he made in regard to diagnosis are absolutely essential and valuable. Diagnosis is the most important thing there is in gynecology. The me-

chanical doing of any operation is purely a matter of individual skill and a knowledge of the technique; but the matter of diagnosis is far more important than anything else. I think the field of diagnosis was well covered and that he gave to you absolute facts.

DR. HUDSON TALBOTT (St. Louis): I arise to say only one thing, and that is that in examination in gynecology it oftentimes is impossible to make a critical examination at the first effort. In other words, only the cooperation of your patient makes this examination possible and with an uneducated patient the examination is very difficult. I therefore quite frequently feel it necessary to make repeated examinations, largely to teach the patient how to be examined. If you get the patient's cooperation and complete relaxation you may be quite accurate in your findings, but just the reverse if the patient does not know how to relax.

DR. R. S. TILLES, closing: In regard to Doctor Dorsett's remarks about perineal repairs, he is perfectly right. I am quite sure he has often blushed for shame for me, and I may have for him. Very often we are disappointed at the way the perineum looks after we have tried our best to do a perineal repair. Lately I have been doing something different. I start the repair of the vaginal wall beginning well out on the side and about one-third up the vagina, repairing the vaginal wall from side to side and not depending entirely on the perineum, the levator ani and associated muscles at the outlet. I find by repairing and narrowing the whole vaginal canal I get much better support.

I heartily disagree with Doctor Talbott. I see no reason why patients should not be put at their ease by properly taking a careful history, which cannot be done in less than fifteen or twenty minutes, and then begin with an investigation of that individual, starting at the top of the head and working down, and by the time you get to the pelvic organs the patient should have confidence in your ability to detect what she wants you to tell her and at the same time rely upon your ability not to hurt her. A second examination might be necessary to reveal certain indefinite things that are not clear to your mind, but as for gaining the cooperation of the patient on the first examination, I see no reason why this cannot be done if the first examination is properly carried out. If we had to examine all the gynecological patients in our clinic three times, we would never get through.

I also want to thank Doctor Mosher for his remarks.

OBSTETRICAL PROBLEMS*

WENZEL C. GAYLER, M.D.

ST. LOUIS, MO.

The woman who makes most trouble for the specialized obstetrician as well as for the general practitioner has the borderline plevix. The borderline plevix does not always justify a Cæsarian section; it is decidedly too large for that. Still, no man can say that she will deliver without a Cæsarian section. It is decidedly too small for that. This borderline pelvis has a true conjugate diameter of seven

*Read before the St. Louis Medical Society, Jan. 20, 1925.

to eight centimeters if the fetus is of average size. If we have to deal with an unusually large child a woman with a much larger true conjugate would be put into the borderline class, while an unusually small child might be delivered spontaneously through a pelvis even smaller than the one mentioned above.

It is now possible to estimate with fair accuracy the dimensions of the unborn child. Instruments are not of much help in this sort of measurement. The McDonald measurement is of some value, but alone it does not tell us much. By means of palpation the obstetrician estimates the size of the head and shoulders, the length of the child, the probable amount of amniotic fluid, in addition to the usual facts elicited by palpation. If these findings are carefully written down before delivery and very carefully compared after delivery a certain technic is slowly but surely acquired. In the course of time this technic leads to very accurate results. The child's head must be measured both with and without instruments. This is, of course, the most important thing. To estimate the size of the shoulders as well as the length of the child is also very important. This is best done by palpation. Most modern textbooks have a beautiful illustration of the instrumental measurement of the child. I have found the pelvimeter of very little value for this purpose. The presence of a monster, twin pregnancy, a large or small quantity of amniotic fluid can also be diagnosed by palpation. These things have been done, however, for a long time. The art of diagnosing the dimensions of the fetus is comparatively new and should be seriously studied by every obstetrician.

Not so long ago it was customary to perform the so-called therapeutic abortion on the very slightest pretext. In those days a disproportion between the fetal head and the pelvis meant almost certain death to the child and probable death to the mother. The pregnant woman demanded and usually received an abortion at the hands of her doctor. The diagnosis was not made with the pelvimeter, however, and the disproportion was not suspected until protracted labor suggested that something was wrong. Then as soon as she became pregnant again (if she survived) she demanded and received relief of the legitimate abortionist of the time. Those days are happily over and the excuses for the legitimate abortion are becoming exceedingly rare.

The delivery of the child four, five or six weeks ahead of her expected date was the next natural development, the diagnosis having again been made by a disastrous obstetric experience. The delivery of this small pre-

mature child is easy. The pelvical disproportion is no longer there. The scheme sounds good. The child, however, is at a tremendous disadvantage. It often dies in early infancy and rarely entirely overcomes the handicap.

Admitting that the early abortion is no longer done, and that the early induction of labor should no longer be done, we have only two possible methods of procedure. We either do an early Cesarean section within a few hours of the start of pains with the membranes intact, or we give the so-called test of labor. The early Cesarean is an exceedingly simple and easy operation with practically no mortality for mother or child and will probably gain in favor as the years pass.

One of the crying needs of the obstetrical profession today is, the ability to produce a full time, 280 day baby that is under-nourished and weighs but five and a half pounds. This child would not only insure an easy delivery, but would gain in weight and strength rapidly and would soon be a normal child.

The so-called test of labor is not such a simple thing. The patient is usually a primipara, because a multipara has already demonstrated what her pelvis will or will not do. The head is still floating above the pelvic brim, which is a very suspicious circumstance. She is prepared for delivery and permitted to suffer in the usual manner until dilatation is complete. Then, with complete dilatation and with membranes ruptured, begins the test of labor. If after several hours of hard contractions under these circumstances the head still floats you have had your test of labor and failed. If we should be so fortunate as to have the head enter the true pelvis during this test, the delivery is usually easy, as obstructions at the pelvic outlet are rare.

When the test of labor fails we are confronted with an entirely new situation. We no longer have the bright, happy woman to deal with; we have the utterly exhausted and discouraged piece of humanity who demands immediate action of some kind.

Under complete anesthesia it is sometimes possible to force the head into the pelvis. The whole left hand is inserted into the vagina while the right forcibly pushes the head into place. This procedure is usually a failure, leaving your patient even more completely exhausted and possibly infected.

Obstetrical forceps properly used, in properly selected cases, have been a boon to the human race. With the head floating after the test of labor and an almost certain disproportion between the size of the head and the pelvic canal, forceps should not be attempted. The obstetrical world is probably

coming to the unanimous conclusion that forceps under these circumstances should be avoided.

The version and extraction technic has been mastered by a great many men and has become almost perfect. It has become an every day occurrence, is easy, rapid and does not seem to do any harm. It is even done and advocated in cases of narrow pelvis when the test of labor has failed. I have always maintained that if the head is too small to come first, it is too small to come last. Version seems absolutely contra-indicated.

Pubiotomy, symphysiectomy and the other bony operations designed to enlarge the pelvic canal have fallen into disuse. They saved many lives but the end results for the mother were not always good and they have almost been forgotten.

There remain then only two methods of procedure, (1) the Cæsarian section if the child is alive, and (2) the crushing operation if the child is dead. The Cæsarian section now, however, is an entirely different procedure from what it would have been if it had been performed before the test of labor. The woman is now completely exhausted, her mental condition is pitiable and she is possibly infected even though all examinations up to this point have been made through the rectum. The results of the Cæsarian at this stage are surprisingly good, however, and it is distinctly to be preferred to high forceps, versions and pubiotomies. I recall one patient at City Hospital No. 1, who had been in labor for thirty-six hours and had been examined no less than twenty times by a midwife without gloves. She made a perfect recovery after the classical Cæsarian.

REPORT OF CASES

Case 1. Had a generally contracted pelvis with a true conjugate of 7 cm. or thereabout. She had had two dead babies via high forceps and it would have been extremely cruel to permit her to have the test of labor again. She was delivered via Cæsarian at the very start of labor. Mother and child are entirely well.

Case 2. This patient presented a different problem. Her pelvis was perfectly normal, with the exception of the antero-posterior diameter which was rather small. The external conjugate was a scant 17 and the true conjugate a trifle over 7. In both cases the women carried to term. Both had babies weighing slightly over seven pounds, both fetal heads floated high and both husbands were large men of big boned frames. The patient in Case 2 was given the test of labor. After thirty-six hours of severe pain the cervix was finally completely dilated and membranes ruptured. After several hours of hard contractions the head still floated and we prepared for the Cæsarian. While preparations were being made the head suddenly came down and she was delivered very easily with low forceps. This

case seems to prove that you never can tell what is going to happen in these border line cases till the last particle of the woman's strength is gone. Had I this patient to deliver over again I would most certainly recommend early Cæsarian.

Case 3. In this case my failure was due entirely to my inability to estimate the size of the child properly. The pelvis was generally contracted with the true conjugate of about 7 cm., scant. I carefully explained to the family that the child could not be born without operative help. They did not believe in hospitals, so I went away and came back every six hours or so for about forty-eight hours. At the end of that time they were desperate and told me to do as I pleased. I again assured them the child could not be born without operation, but she had a spontaneous delivery in the hospital elevator before she could be taken to the delivery room. The baby weighed about five pounds but seemed entirely mature and is now a perfect child. The failure to make a correct prognosis in this case was due entirely to the failure to estimate correctly the size and weight of the child.

CONCLUSIONS

1. If you wait long enough spontaneous delivery may occur through a surprisingly small pelvis.
2. The estimation of the size of the child is as important as the measurement of the pelvis.
3. Version seems contra-indicated when there is disproportion between the size of the head and the pelvic canal.
4. The high forceps operation is falling into disuse.
5. The early Cæsarian is a simple operation with beautiful results for both mother and child.

Wall Building.

PERTINENT FACTS ABOUT THE THYROID

FRANCIS REDER, M.D.,

ST. LOUIS

Diagnostic care and professional conservatism accorded an enlargement of the thyroid gland are factors that embody important problems. A gland which normally weighs an ounce and a fraction thereof, which receives in proportion to its weight twenty-eight times as much blood as the head and through which all the blood in the body passes once every hour, must be recognized as an organ of the first magnitude.

It can be assumed that constitutional peculiarity or individualism as governed by habits, professions, exposure, ambient conditions, food, drink, worries, anxieties, work, play, etc., can find in the physiologic activity of this gland a factor that regulates a balance, influences an equilibrium.

The thyroid is a ductless gland and is supplied chiefly by the sympathetic nervous system.

The gland has been aptly called the balance wheel of nutrition and without a normal activity of its cells an impaired state of health must exist. Demonstrable evidence of this fact is shown in a child born without a thyroid. Such a child fails to develop mentally or physically. Additional evidence is shown in the thyroidectomized adult. Such an individual presents a peculiar deterioration known as myxedema.

During the last twenty-five years a great amount of research work on problems pertaining to the thyroid gland has greatly elucidated the activities of this organ, both in health and disease. The present etiology of its diseases is still somewhat problematical. It has been accepted that in the condition known as simple goiter the underlying cause is a deficiency in iodine in the soil. From this the inference must be made that it is to a great extent the proper iodine content in the gland which prevents an imbalance.

Iodine is fairly soluble and readily incorporates itself with the water coming in contact with the soil. When such water is consumed for drinking purposes iodine is introduced into the system, thus placing whatever supply is necessary at the option of the thyroid gland.

Another mode and a very pleasant way of introducing iodine into the system is through fresh vegetables and sea food. Doubtless the lack of iodine in the soil has given us a geographical pathology when the thyroid gland is considered. For instance, the greater goiter sections of the U. S., are in the northern part of the mountain range section of the far West, the upper Mississippi and around the upper Lake regions—in these regions the soil layers from the sea lie several hundred feet below the surface. They lie too deep for any iodine absorption by the vegetable world and water for drinking purposes is seldom drawn from such depths. Inhabitants of the Atlantic and the Pacific states are protected by the iodine in the air by reason of sea sprays and the iodine in the sea food. In the southern Mississippi Valley protection is afforded the people by the iodine laid down by the sea which overlay the section a few centuries ago. It would appear that the scientific achievement relative to the cause of simple goiter is quite convincing.

The etiological factor pertaining to goiters with different degrees of seriousness as menaces to health and life, befogged as it still is at the present time, strongly inclines toward a "vasomotor neurosis" or an "affection of the sympathetic." It is a pertinent fact, however,

that a thyroid gland in a state of simple goiter, to which children and young adults are subjected, can furnish soil in which other causes can produce more serious goiters. It is the personal equation in disease.

The thyroid belongs to a glandular family known physiologically as endocrines. In this family we find the parathyroid, thymus, pituitary (anterior and posterior lobes), pineal, ovaries and testicles, suprarenals (cortex and medulla), and the islands of Langerhans in the pancreas. These glands in their function produce an internal secretion, better known by the Greek—hormone, or messenger. This internal secretion is passed directly into the blood stream to exert its action upon the economy, either beneficially or deleteriously.

The interaction of this chain of glands is amazing. In their work much predilection is shown, some working at the same time directly with some of the others and directly against the rest.

Classification of their activities is based on their effect on metabolism. The thyroid is classed as catabolic because it accelerates body processes, shown easily because its hyperfunction in goiter gives excitability and tachycardia. It is well known that thyroid disturbance shows in menstrual phenomena. In some instances the thyroid is known to vary directly with pelvic activity, when it enlarges during pregnancy and with the periods. A thyroid hypertrophy in Graves' disease is very prone to cause the menstrual function to be scanty or absent and increased by its atrophy in myxedema (Novak).

The thyroid gland responding in its determining relation to the "diathesis" of the person will have its activities minimized when the sympathetic nervous system is sluggish; while in an irritable state of the sympathetic system definite manifestations of glandular activity, such as swelling of the thyroid with pregnancy, almost amounting to Graves' disease, to short and sudden changes in body weight and to functional dysmenorrhea may be found. Based on physiological facts the assertion can be ventured that symptoms of disease of the thyroid are produced through either the nerves or the internal secretion.

In the thyroid the changes in the cellular structure constitute the pathological anatomy of the disease, while the changes in their function constitute the pathological physiology.

Cursorily alluding to the structure of the thyroid nothing of a complicated nature is discernable, even in an histological aspect. There are three important histological elements in the thyroid gland which enter into its anatomic formation that should be borne in mind when

considering the pathology of the gland, viz., the connective tissue, the epithelial or specific enzyme cells, and the blood and lymph vessels. Much of the pathology of the gland rests with these structures which may be involved separately to produce enlargements.

In the first place it should be clearly understood that an enlargement of the thyroid, conveniently termed goiter, in itself means little or nothing as far as describing the disease is concerned. It signifies only that there is sufficient enlargement of the thyroid gland so that its prominence is noticeable upon the neck and we interpret this enlargement as but one sign of thyroid disease.

The classification of the diseased thyroid is well known to all of us. There are quite a few accepted classifications; for clinical purposes, however, the simplest form should be the acceptable one. Plummer's classification I regard ideal. Under the pathological grouping a much more extensive division, according to tissue or secretion changes, must of necessity be made. I wish to deliberately narrow the pathological field to the lesion which is most common. This is a lesion of the secreting structures or epithelial elements of the thyroid. We have here the simple hyperplasia of the gland, an increase in the acini and increase in the number of cells lining the acini. It is the condition recognized as a general hyperplasia, a parenchymatous goiter. Whenever pathological changes manifest themselves in a circumscribed increase with an encapsulation the condition is known as an adenoma of the thyroid. Such an enlargement may exist for a long time without producing any symptoms as there is seldom a hyperproduction of the gland secretion. If through some systemic vagary an excess of gland secretion is produced, it is usually neutralized in the metabolism because no evidence of thyroid intoxication manifests itself. This kind of an enlargement is usually seen at puberty, during gestation and after parturition.

Whenever in an enlarged thyroid there is a loss of balance between secretion and absorption, there results an extensive retention accumulation of colloid material, the normal secretion from the cells of the acini, and a typical colloid goiter is developed. As the process advances pressure upon the columnar cells of the distended tubules causes them to flatten. Although the secretory activities of these cells are not inhibited by compression, the normal physiological secretion is changed to a serous material. With the accumulation of this serous material a cystic goiter develops. Should at some time a blood vessel rupture

into the cyst, the condition would be known as a grumous cyst of the thyroid.

Quiescent as these thyroid conditions may appear during the earlier time of their existence, advanced adult life may find the adenomatous elements of the gland functioning, producing a condition known as hyperthyroidism. The exact mechanism of its production is not known. Suffice it to say that the disease is responsible for a grave intoxication of the central nervous system. The adenomatous goiters associated with hyperthyroidism and the exophthalmic goiter comprise the toxic group and present a well known syndrome of symptoms.

With this goiter proposition there has always been uppermost in my mind three questions: What goiters demand operation? When to operate and how much of the gland should be removed? Shall it be preliminary ligation, or radical operation in stages or in one operation? I have not grown sufficiently old in thyroid surgery to attack the gland with a feeling of abandon even if the patient's condition is good. In my limited experience I still feel that an operation for goiter, mild as the procedure may appear, is a dangerous undertaking.

In recent years the surgical attack upon the thyroid has been amazingly vigorous and it would almost appear as though conservative limits had been intruded upon. It is astonishing how many individuals with goiters have developed a pro-surgical psychology, which makes of them easy victims for operation, whether necessary or not.

Should a goiter be removed merely for cosmetic effect? I may be pardoned for the answer. The goiter is usually removed when enlargement is in sufficient evidence. I have never removed a goiter for its unsightly appearance.

In an enlargement of the thyroid causing no pressure, no distress and without symptoms of hyperthyroidism, no surgery should be undertaken. This type of goiter should be submitted to medical treatment. A careful watch should be kept of the patient for the onset of symptoms of hyperthyroidism, when an operation should be advised. A goiter adenomatous or colloid in character when producing pressure symptoms should be subjected to operation. Furthermore should such a goiter, especially in its cystic stage, be inclined toward an intrathoracic location, it should be removed. All thyroid enlargements manifesting a marked nodular feel should be subjected to operation as a prophylactic measure. The fact must not be overlooked that a goiter may eventually

undergo degenerative processes of a malignant nature, and a nodular goiter seems especially prone to invite such virulent deterioration.

A non-toxic, simple goiterous enlargement in a neurotic individual should not be subjected to operation. The removal of thyroid tissue will inflict a definite damage upon the individual. The so-called "burned-out" goiter, a patient with a goiter heart, first described by Krauss, is often benefited by operation. These cases have gone past the toxic into the chronic stage and are not rare. The object of the operation rests with the removal of the foci of irritation, not only the toxic foci but the degenerative thyroid tissue, which is partly responsible for some of the hyperactivity.

A goiter showing toxic symptoms, even though they appear somewhat indefinite, should be removed without delay. It is dangerous practice to wait for the so-called cardinal symptoms of hyperthyroidism to establish themselves. An unexplained tachycardia should always be looked upon with suspicion. Pregnancy must be here excluded. A violent thyrotoxis developing during pregnancy is an extremely serious condition with and without operation. The tendency of this type of goiter is either to become spontaneously cured toward the end of pregnancy, or to end in death. A pregnant woman with a prominent toxic goiter when operated on will usually miscarry in the seventh month, become very sick or die. They are extremely bad surgical risks.

Goiterous enlargements associated with a well defined thyrotoxis present the most perplexing problems for treatment. Our present state of therapy for this serious condition does not offer much encouragement as to a marked corrective influence, and for happier results surgery must be resorted to.

In the light of our present knowledge Graves' disease from its incipency is a surgical disease and results will depend on timely operation. For this advance we are grateful to Kocher and Mayo.

A surgical attack upon a toxic goiter must be undertaken with great precaution and provident care. No surgical intervention should be instituted when an active thyrotoxis is advancing toward a crisis and this condition must be recognized. With the subsidence of the violent symptoms the question arises as to the extent of surgical interference which the patient will bear.

Whether a preliminary ligation may offer the better result, or whether a radical operation in stages, or in one operation, should be given preference. These are problems in thyroid surgery that must be decided by the experience

of the surgeon and his successes or failures will record for him the correctness of his surgical judgment.

In determining how much of the gland should be removed in these toxic cases no definite landmark can be visualized. It appears to me, however, that the surgeon must be guided by the violence of the toxic state. If the condition is a hyperplasia, accompanied with violent toxics, a double lobectomy should be undertaken and carried to the physiologic limit, i. e., leaving about one-sixth of the glandular substance. We know that scant excisions are frequently followed by a recurrence and, though a secondary operation may relieve the succeeding hyperthyroidism, it appears that a double lobectomy in these cases is less speculative as to ultimate results. There is no doubt in my mind that the better results obtained with a double lobectomy over an extensive excision are dependent upon the complete severance of anastomosis between superior and inferior thyroid vessels. In extreme intoxication with exophthalmic manifestations the procedure should be even more radical, enough of the gland being allowed to remain at the superior and the inferior poles to aggregate about $\frac{1}{8}$ of the whole thyroid.

The extensive removal of so large an amount of this valuable gland tissue becomes necessary for the cure of exophthalmos, as it seems to be the only procedure harboring any hope for many of these unfortunate cases.

In conclusion I may state that every thyroid enlargement should be watched, its progress should be observed, its anatomical and clinical features should be carefully scrutinized, and if any pathological changes evidence themselves they should be treated according to the indications present.

415 University Club Bldg.

SUBUNGUAL EXOSTOSES

From the Department of Surgery, Washington University Medical School.

J. G. PROBSTEIN, M.D.,

AND

BARNEY BROOKS, M.D.

ST. LOUIS

Subungual exostosis is a condition which is characterized by the spontaneous development of a bony tumor under a nail, usually of the nail of the great toe. This condition is of comparatively infrequent occurrence. Its existence is not generally appreciated and errors of diagnosis and treatment occur. Furthermore, there is not a well defined opinion as to the etiology of subungual exostosis.

To Dupuytren¹ belongs the credit of first calling attention to subungual exostosis. Concerning this condition he writes:

"It occasionally happens that the upper surface of the ungual phalanx of the great toe presents a swelling which has been commonly mistaken for a disease of the nail.



Fig. 1. Specimen removed at operation in Case 1, showing tumor projecting from beneath nail of the great toe.

"The above affection has not been noticed, as far as I know, by any author. It is painful and inconvenient, rather than dangerous."

"I know not what cause to ascribe it for it usually occurs in individuals who have received no injury, and is apparently unassociated with a scrofulous diathesis or syphilitic taint. The morbid growth in question has usually been mistaken for a wart and treated as such by cauteries, which are always under these circumstances productive of much mischief. The nail has in other cases been fixed upon as the seat of the disease and removed accordingly, with no beneficial effect. In one case I saw, the ungual phalanx was removed for this affection."

At the time of this writing Dupuytren states that he had seen thirty instances of subungual exostosis. Davidson² has reported his experience with this condition. The various textbooks of surgery only casually mention or completely ignore this condition.

This paper is a report of the study of five cases of subungual exostosis which have been treated in the Washington University Dispensary during the past eight years. The frequency of this condition is illustrated by the fact that during this same period twelve thousand patients were admitted to this Dispensary. A brief summary of the cases studied follows:

Case 1. M. C. Age 12. Admitted Dec. 5, 1916. Two months ago noticed a small growth protruding

from beneath the medial margin of the nail of the great toe. The patient's family physician removed part of the nail, believing the condition was that of an ingrown toe nail. The growth recurred in a few months.

On examination there is an irregular tumor protruding from under the medial surface of the nail of the great toe, (Fig. 1). The tumor is red, ulcerated. X-ray shows a projection of bone from the dorsal surface of the terminal phalanx of the toe. The condition was believed to be an osteosarcoma and the patient was referred to the St. Louis Children's Hospital for treatment. At operation the great toe was amputated at the metatarsophalangeal joint.

Examination of the specimen removed shows the tumor to be composed of bone and cartilage. The pedicle of the tumor is cancellous bone (Fig. 2). The superficial portion of the tumor is composed of cartilage (Fig. 3). At the junction of the cartilage and bone there are several well defined areas of characteristic enchondral bone formation. The tumor is in every way similar to the well known juxta-epiphyseal osteochondromata which occur most frequently at the distal end of the femur and proximal end of the humerus.

Case 2. R. D. A. Age 4½ years. Admitted May 27, 1919. Five months previous to admission the thicpatient stubbed the great toe. One month ago the mother noticed that the nail was elevated by a growth. The patient has been under the care of a physician for a month who has considered the condition as an ingrowing toe nail.

On examination there is a wart-like growth protruding from the margin of the nail of the great toe. X-ray shows an exostosis on the dorsal aspect of the terminal phalanx. Patient was referred to the St. Louis Children's Hospital for treatment.

The exostosis, half of the nail and matrix were excised. Convalescence uneventful. This patient was examined October, 1924, four and a half years after operation. No recurrence. Good cosmetic result.

Examination of the tissue removed at operation shows the tumor to be composed of bone and cartilage covered by unbroken squamous epithelium. The pedicle of the tumor is cancellous bone, the trabeculae of which are thick and dense. The most superficial portion of the tumor shows active new



Fig. 2. Microscopic section of toe and tumor, Case 1. 1. Toe nail. 2. Epiphyseal cartilage of the terminal phalanx. 3. Bone pedicle of subungual exostosis. 4. Cartilaginous cap of tumor.

bone formation. For the most part the new bone formation has the characteristics of periosteal new bone growth. In one area, however, there is an island of cartilage in contact with the bone. This area of cartilage shows the characteristic picture of enchondral new bone formation.

Case 3. Miss H. Age 20 years. Admitted Jan. 28, 1918. One year previous to admission she noticed

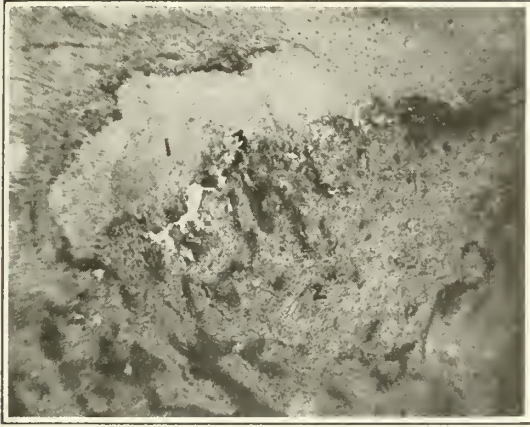


Fig. 3. Photomicrograph of the cartilage bone junction of subungual exostosis, Case 1. 1. Cartilage cap of tumor. 2. Bony part of tumor. 3. Site of enchondral new bone formation.

a hard growth on the left great toe. The growth has gradually increased in size. Pain on pressure. No history of injury.

Under the edge of the nail of the left great toe is a tumor 1x2x1 cm., which elevates the nail. The tumor is hard and not tender. There is no ulceration. The tumor is attached to the bone. X-ray shows exostosis in the dorsal surface of the terminal phalanx. Referred to the hospital for treatment. The exostosis, the lateral margin of the nail and underlying matrix were removed. Convalescence uneventful. Examination October, 1924, five and a half years after treatment, showed no recurrence. Excellent cosmetic and functional result.

The tissue removed was not available for examination.

Case 4. R. R. Age 13 years. Admitted Sept. 27, 1919. Two years previous to admission was noticed a small lump on the end of the middle toe of the left foot. The lump has gradually increased in size. No known injury. No pain.

On examination of the distal end of the middle toe of the left foot there is a firm rounded tumor situated beneath the nail which is slightly elevated. The tumor is hard and is apparently connected with the distal phalanx. X-ray shows exostosis on the dorsal aspect of the distal phalanx.

The tumor and the distal portion of the nail were removed. Convalescence uneventful. Patient reported five years after treatment that there has been no recurrence.

Examination of tissue removed at operation shows the tumor to be composed of cancellous bone with thick, dense trabeculae. The marrow shows the picture of chronic inflammatory disease with dense connected tissue, thick wall blood vessels, and round cell infiltration. The superficial portion of the tumor is composed of dense fibrous tissue. No cartilage found.

Case 5. M. D. Age 16 years. Admitted Feb. 20, 1919. Three years previous to admission noticed a growth under the nail of the great toe. The nail was removed one year ago, but the condition has not improved.

On examination the nail of the great toe is short, deformed. The site originally occupied by the nail is filled with a stony hard tumor apparently attached to the underlying bone. (Fig. 4.) The bony tumor was removed from the dorsal aspect of the distal phalanx.

Examination of the tissue removed at operation shows the tumor to be composed of bone and cartilage. The pedicle of the tumor is cancellous bone. The superficial portion of the tumor is composed of cartilage. At the junction of the bone and cartilage there is characteristic enchondromal new bone formation, the cartilage cells being arranged in rows perpendicular to the plane of junction of bone and cartilage. There is very little evidence of inflammatory disease.

DISCUSSION

The diagnosis of subungual exostosis is not difficult if the examining physician has knowledge of the existence of this condition. In the five cases which have been studied in this paper in only two instances was the true nature of the condition appreciated at the first examination and the proper treatment instituted. In Case 1, the condition was considered to be a sarcoma and the entire toe was amputated. In Cases Nos. 2 and 5, the patients had been treated for diseases of the nail previous to the time of their admission to the Dispensary.

The etiology of this condition is worthy of brief consideration. Dupuytren was apparently impressed by the fact that traumatism did not adequately explain the origin of subungual exostosis. In the examination of the tissues removal at operation from four of the cases reported in this paper, it has been found that in three instances the presence of a cartilage cap on the exostosis makes it most likely that these tumors are true cartilaginous exostoses comparable to the juxta-epiphyseal exostoses which



Fig. 4. X-ray of the subungual exostosis of Case 5.

are found most frequently near the distal end of the shaft of the femur and the proximal end of the shaft of the humerus. The fact also that in all of the cases studied the individuals were children or young adults is in favor of this view.

The routine examination of X-ray plates of the hands and feet shows that exostoses of the phalanges are comparatively frequent. The great majority of these exostoses do not produce any inconvenience. It would seem likely that most exostoses of the phalanges had the same etiology and that the subungual exostoses were peculiar only in regard to their location. It is more likely that an osteochondroma growing under a nail would produce symptoms than were it projecting into the soft parts elsewhere. The occurrence of exostoses with cartilaginous caps is probably most satisfactorily explained by the assumption that the cartilage represents displaced fragments of the epiphyseal cartilage on the shaft of the bone in the process of growth in length. The displaced isolated fragment of cartilage continues in the stimulation of the growth of bone thus forming a projection from the shaft of the bone.

In the one case in which the tissue removed at operation was examined and no cartilage found, it is possible that previously existing cartilage had been destroyed in the chronic inflammatory disease induced by the presence of the exostosis.

In regard to the treatment of subungual exostoses, if the view expressed above regarding their etiology is correct then the subsequent recurrence of the tumor would be prevented if all of the cartilages were removed. It, of course, is assumed that the bony portion of the tumor should also be excised; but the portion of the tumor which is responsible for growth and recurrence is probably the cartilage bone "junction." The treatment should consist, therefore, in simple local excision of the tumor, care being taken to remove completely all the cartilaginous portion. In order to accomplish a complete local excision of the tumor it may be necessary to remove part of the nail and underlying matrix, but in no instance should any more tissue be removed than is necessary to insure complete extirpation of the tumor.

Missouri Building.

REFERENCES

1. Dupuytren. *Injuries and Diseases of Bones*. Sydenham Lectures. London. 1846.
2. Davidson. *Amer. Jour. Orthop. Surg.* 1916, XIV, 150.

CLINICAL OBSERVATIONS ON THE USE OF MAGNESIUM SULPHATE WITH MORPHINE-HYOSCINE IN LABOR. PRELIMINARY REPORT

RICHARD PADDOCK, M.D.

ST. LOUIS

It has been known for some time that aside from the general anesthetic effect of magnesium sulphate, there is a depressant effect which comes from the administration of smaller doses. The work of Gwathmey and his co-workers, as well as the work of Weston and Howard, shows that magnesium sulphate solution has this depressant effect when used clinically.

A number of years ago, Meltzer, Auer, and Gates, went rather deeply into the pharmacological effect of magnesium sulphate as a general anesthetic. As a general anesthetic this drug has been almost entirely abandoned, owing to the large quantities required and the narrow margin of safety. Gwathmey and workers contend that when given with certain other drugs magnesium sulphate has a definite synergistic effect, so that doses much smaller than the anesthetic dose will produce considerable effect when injected subcutaneously or intramuscularly. This synergistic effect is supposed to be more marked when the drug is used with morphine.

In the earlier experimental work of Meltzer and associates, it was pointed out that the animals became much less active when given a dose of magnesium sulphate which was much below the anesthetic dose. Weston and Howard have also shown that small doses of magnesium sulphate have a sedative effect when administered subcutaneously or intramuscularly.

In reviewing Gwathmey's recent publications, it occurred to us that the combination of magnesium sulphate with hyoscine and morphine might prove a more valuable combination. That it might have a two-fold advantage: (1) That the dosage of hyoscine could be materially reduced by such a combination and that its effect might be more lasting even in these diminished amounts; (2) that it might reduce the definite restlessness which is evident in about 25-30 per cent of the cases, and which, although in no way harmful, is a disagreeable feature of the method from the standpoint of the attendants. It is with these ideas in mind that we attempted to develop a combination which might prove satisfactory, and develop a more ideal method.

We have attempted to use in our cases, doses of magnesium sulphate which, when given

with morphine-hyoscine, will tend to inhibit the restlessness of patients under morphine and hyoscine semimarcosis. The use of morphine and hyoscine in labor has given very satisfactory results in the great majority of cases in the obstetrical service. If one refers to the analyses of results which have been reported by H. Schwarz, Krebs and Wilson, and later by Krebs and O. Schwarz, there can be little doubt as to the efficacy and safety of the method as used in the obstetrical service of Barnes Hospital.

One objectionable feature in the morphine-hyoscine semimarcosis is the restlessness seen in some cases. This feature we have attempted to eliminate by the use of magnesium sulphate solution administered during the course of the semimarcosis. Since the method of producing morphine-hyoscine semimarcosis has been so satisfactory for a number of years, no marked deviation from the usual mode of administration was considered advisable.

Using our regular method as a background, we have selected a dosage of magnesium sulphate which has varied with the individual. The method of the procedure used is as follows: Patients considered suitable for conduct of labor under semimarcosis when definitely in labor were given as an initial dose, 1/6 gr. of morphine sulphate with 1/130 gr. of hyoscine hydrobromide. After the initial dose the patient is requested to be as quiet as possible and to refrain from conversation with those attending her. All extraneous stimuli such as bright light, sounds, and manipulation, are done away with at this time. Forty-five minutes after the first injection, a second injection of hyoscine is given. By this time the patient is usually quite drowsy and sleeps at intervals between contractions. Forty-five minutes after the second injection the first dose of magnesium sulphate is given.

The preparation we have used is a 25 per cent aqueous solution prepared in ampoules. The dosage used in our first cases was quite small because we wished to proceed cautiously and give a minimum dose to produce the desired effect. After a number of results were obtained we felt that the optimum dose obtained so far is 1.3 c.c. of the solution per 10 kilograms of body weight. For example, a patient weighing 140 lbs. would receive 8.2 c.c. The solution in all cases has been given intramuscularly by means of a long needle with small bore.

The magnesium sulphate solution is repeated if necessary after an interval of two to five hours, depending upon the restlessness of the patient. The semimarcosis is continued throughout the subsequent course of labor by the ad-

ministration of small doses of hyoscine hydrobromide. These subsequent doses are approximately 1/260 of a grain and are repeated as necessary but not more frequently than one-and-a-half hours apart.

The method outlined has been used in thirty-three cases with results which are in general quite satisfactory. The cases were carefully selected in order to rule out any unfavorable results from other causes. With the exception of three cases all of the patients were primiparae. The other three had all had miscarriages of short gestation. The largest quantity of magnesium sulphate solution given any one patient during labor was 19.4 c.c. and the smallest was 3 c.c. The longest labor in the series was 25.15 hours, and the shortest was 5 hours.

Being entirely open-minded on the subject, we have worked up and analysed this series of cases. We have studied these cases from a very critical point of view. From the patients' standpoint the amnesia and analgesia were good in twenty-eight cases, fair in three cases, and poor in one case only. From the standpoint of what we wished to accomplish in addition to the amnesia, we will say that the results were satisfactory in all but two cases, and in the majority of cases, eighteen in number, the results were extremely favorable for the method.

All of the children were born living and left the hospital in good condition. In only three of the cases was resuscitation of any kind necessary. In one of these cases it was definitely necessary because of a very markedly constricted umbilical cord. Four of the mothers were seventeen years of age or less, and three were over thirty-four years of age.

Our cases were watched carefully following delivery to see if any latent unfavorable effects could be attributed to the use of magnesium sulphate. There were no marked complications during or after labor that we could attribute to the use of magnesium sulphate. In general the results were quite satisfactory. In almost every single case restlessness was an unimportant feature, or was entirely eliminated. Of course, in the majority of cases where morphine-hyoscine is used alone, the restlessness of the patient is not considered troublesome enough to make the method unsatisfactory or unsuitable for use, but by the addition of magnesium sulphate to the morphine-hyoscine method the restlessness is almost entirely eliminated.

From the standpoint of the patient the results obtained may best be illustrated by describing the course of a typical case. Following the technique as outlined above, the

patient is given the initial dose of morphine-hyoscine. Some thirty minutes later the patient will state that the pains are less severe and she is slightly drowsy. Some flushing of the skin is noted. Shortly after the second injection (hyoscine) the patient is noted to sleep between contractions. At this time the patient is more indifferent to surroundings and answers questions rather indifferently. By the time of the third injection the patient is usually in a state of amnesia, coordination is poor and she may or may not answer questions when aroused, and is irrational in speech. At the time of the magnesium sulphate injection the patient is usually quiet and offers little resistance to the intramuscular injection. During the balance of the labor the amnesia is continued by injections of hyoscine as indicated, magnesium sulphate being repeated in some cases at two to five hour intervals. The delivery is carried out as in any case, depending upon the indications and the choice of procedure at the discretion of the operator.

The patient usually sleeps several hours after delivery if not disturbed. This sleep following delivery is ideal, for on awakening the patient is fully conscious and free from the effects of the semimarcosis and amnesia. On interviewing patients some twelve to twenty-four hours after delivery, the experiences of the patient are somewhat as follows: Some relief of pain was experienced after the first injection. Shortly after the second injection the pains subsided and nothing else was remembered. Very few patients remember more than two injections. Conception of the time elapsing during the course of labor is lost. Some events after the second injection are remembered in a few cases.

As said before, our results in this series of cases have been conducted with the idea of giving the method a fair trial. We have kept well within the limit of safety in our dosage of magnesium sulphate, our dose being many times smaller than the anesthetic dose. We have found our results encouraging and in the majority of cases very satisfactory. We believe that the method has given results highly in favor of the procedure and of distinct value in the conduct of safe, painless obstetrics.

We are not as yet recommending this procedure in the first and second stages of labor in preference to morphine-hyoscine semimarcosis as carried out by the Gauss method, nor do we recommend its use in the present modified way. We feel, however, with further experience that the procedure should necessitate the use of considerably less hyoscine, as well as doing away with the restlessness of the patient during pains in most instances. We

therefore feel justified in carrying the procedure further in hopes of developing a more ideal method from every standpoint.

REFERENCES

- Gwathmey, James T. *Jour. Am. Med. Assoc.*, 1921, **IXXVI**, 222.
 Gwathmey, James T., Donovan, E. P., O'Reagan, J., and Cowan, L. R. *Am. Jour. of Obst. & Gynec.*, 1923, **VI**, 4.
 Weston, P. G. and Howard, M. Q. *Am. Jour. Med. Sciences*, 1923, **CLXV**, 3, 431.
 Meltzer, S. J. and Auer, John. *Am. Jour. Physiol.*, 1905, **XIV**, 366.
 Meltzer, S. J. and Auer, John. *Jour. Exp. Med.*, 1906, **VIII**, 692.
 Meltzer, S. J. and Auer, John. *Am. Jour. Physiol.*, 1906, **XV**, 387.
 Meltzer, S. J. and Auer, John. *Am. Jour. Physiol.*, 1906, **XVI**.
 Matthews, L. A. and Brooks, Clyde. *Jour. Pharma. & Exp. Therapeutics*, 1910-1911, **II**, 87.
 Gates, F. L. *Jour. of Pharma. & Exp. Therapeutics*, 1914-1915, **VI**, 610.
 Gates, F. P. and Meltzer, S. J. *Proc. Soc. Exp. Biol. & Med.*, 1914, **XI**, 97.
 Gates, F. L. and Meltzer, S. J. *Proc. Soc. Exp. Biol. & Med.*, 1914, **XI**, 167, 102, 103.
 Schwarz, Henry. *Am. Jour. Obstetrics*, 1919, **Vol.** 79, 46.
 Krebs, O. S. and Wilson, L. R. *Jour. Mo. Med. Assoc.*, 1923, **Vol.** 20, 12.
 Schwarz, O. H. and Krebs, O. S. *Jour. Am. Med. Assoc.*, 1923, **Vol.** 81, P. 1083.

THE IMPORTANCE OF REPEATED EXAMINATIONS OF THE SPUTUM AND OF THE USE OF THE ANTIFORMIN METHOD

LAWRENCE SCHLENKER, M.D.,

ST. LOUIS

As the one pathognomonic sign in pulmonary tuberculosis is the presence of tubercle bacilli in the sputum, it should be insisted upon that the sputum examination be performed with the care and thoroughness given to other important laboratory procedures. There should also be constantly kept in mind that fact that a single sputum examination, when negative, is wholly inadequate.

The three following facts may be conceded: A positive diagnosis of tuberculosis can be made only from finding tubercle bacilli in the sputum. The patient with bacilli in his sputum has tuberculosis regardless of the presence of conflicting or the absence of corroborating signs. A diagnosis of tuberculosis is untenable in the face of repeated examinations of the sputum which remain negative.

It is greatly disconcerting to find that in many of the larger laboratories the antiformin treatment of the sputum is not in regular use, while the readiness with which a single nega-

tive sputum is accepted as conclusive that tuberculosis can be ruled out should not prevail.

The practitioner is quite often disturbed by finding tubercle bacilli in the least expected places. Here the advantage of having made his diagnosis and instituting treatment early cannot be overestimated. During and immediately following the pulmonary hemorrhage which many times is the first palpable sign in tuberculosis, one often finds bacilli in the expectoration. Tubercle bacilli may be found in the sputum of some tuberculosis patients when no moisture whatever can be heard in the lungs. It should always be kept in mind that syphilis, diabetes, hepatic cirrhosis and nephritis are often accompanied by tuberculosis, and that a stout or robust appearance does not forbid the presence of the disease. The fact that a patient expectorates necessitates an examination of his sputum.

An analysis of the sputum examinations in three hundred patients consecutively admitted to Mount Saint Rose Sanatorium will now be submitted. All these patients were of the white race, about equally divided as to sex, and of ages ranging from ten to eighty years, thirty per cent being between twenty and thirty years of age. Of the cases definitely diagnosed as having tuberculosis, two hundred and forty-eight were in a far advanced stage, nine in a moderately advanced, and two were in an early stage.

The routine of the Sanatorium laboratory is to begin with the sputum collected the morning after admission of patient. A smear made from selected particles is treated by the Ziehl-Nielsen method and examined closely for at least fifteen minutes. If no bacilli are found the entire specimen is digested with thirty per cent antiformin solution (Hiss and Zinsser) in an incubator for from one-half hour to three hours, until liquified, and then run through a high powered electric centrifuge. The sediment is stained and examined as before. No tubercle bacilli being found, the entire procedure is repeated at three days intervals till bacilli are found or until at least ten such examinations have been made. All examinations in this series were made by the same technician and by the uniform technique.

Division of the three hundred cases will be made into (1) the positive group, two hundred and fifty-nine cases, in which bacilli were found at some examination; and (2) the negative group, forty-one cases, in which bacilli were found at no time. The positive group will first be taken up. By bacilli will be meant tubercle bacilli.

First Examination: Bacilli found in the simple smear in 227 cases. Bacilli absent in the

smear but found in the same specimen of sputum after antiformin treatment in 17 cases.

Second Examination: In nine cases bacilli were found at the second examination after being absent in the first, bacilli in the simple smear in 8 cases. Bacilli found only after antiformin treatment in 1 case.

Third Examination: Negative twice, the sputum contained bacilli at the third examination in 3 cases. Bacilli in the simple smear in 2 cases. Bacilli found only after antiformin treatment in 1 case.

Fifth Examination: It required the examination of 5 specimens in one patient to find the bacilli, and antiformin treatment of the sputum was necessary in 1 case.

Seventh Examination: Six specimens of sputum repeatedly proved negative in one case. The seventh specimen, negative in the smear, showed bacilli after antiformin treatment in 1 case.

Eighth Examination: In one patient the sputum showed no bacilli in seven specimens examined, smear and antiformin. The eighth specimen, again negative in the smear, after treatment with antiformin exhibited bacilli in 1 case.

In the negative group of forty-one cases fourteen most probably had tuberculosis but remained in the Sanatorium too short a time to permit the repeated sputum examinations. The remaining cases were finally diagnosed: Chronic bronchitic, all in aged people, 4 cases; chronic myocarditis, 4; sensitization asthma, 2; pulmonary abscess, nontuberculous, 2; unresolved pneumonia entirely clearing up while under observation, 2; and one case each of the following: Bronchiectasis, streptothricosis of lungs, malignancy of lung, chronic empyema with full clinical recovery during observation, post-influenzal inflammatory condition which cleared up in a short time, tuberculous peritonitis without active lung disease, cardiac decompensation, chronic nephritis, hepatic cirrhosis, splanchnoptosis, neurosis, epilepsy, no diagnosis.

SUMMARY

By repeatedly examining specimens of sputum, taken at intervals, tubercle bacilli were found in fifteen cases in which the first specimen examined showed no bacilli. Thus a gain of six per cent in efficiency was obtained.

Antiformin digestion of the sputum followed by centrifugalization and examination of the sediment revealed tubercle bacilli which could not be seen in the simple smear in twenty-two cases. The antiformin method was more efficient by nine per cent. It was particularly

efficient in patients who expectorated few bacilli and these at intervals.

CONCLUSIONS

Sputum examinations when negative for tubercle bacilli cannot be called complete unless repeated specimens, collected at intervals, have been examined, and unless the sputum has been subjected to antiformin treatment.

3515 South Grand Blvd.

BRAIN ABSCESS OF OTITIC ORIGIN*

W. D. BLACK, M.D.,

ST. LOUIS

Experience of many years in otologic work has taught me many things regarding these serious cases. I learned that, regardless of the voluminous articles published on this subject, practitioners of medicine seem to be too conservative and arrive at a diagnosis, "head case," generally too late for the aural surgeon to operate with a chance of recovery.

To show the great necessity of an early diagnosis I will state that the mortality in an otologic clinic is much less than it is in private ear practice. The usual mortality in practice outside of an ear hospital or clinic is about as follows: Cerebellar abscess, 70 to 85 per cent, cerebral abscess, 65 to 70 per cent, thrombosis of the lateral sinus and jugular, 40 to 50 per cent. Suppurating labyrinthitis is also high and exceedingly high when intracranial complications set in. In view of such an enormous mortality one must consider a recovery a great advance for modern surgery, for without surgical attention they all die except a rare spontaneous cure of thrombosis.

All otitic abscesses of the brain and thrombosis of the lateral sinus and jugular vein are the result of bacterial infection, the streptococcic group being the most frequent, the pneumococcus and staphylococcus next in frequency.

If ear suppurations, acute or chronic, received the attention given other suppurative conditions of the body I am sure intracranial complications would be less frequent and when they did occur would be more apt to be recognized early. With good drainage in suppurating ears, these grave complications would not occur and I can reasonably state that when drainage is not good it is generally the result of neglect. The old statement that has been handed down through generations, "the child will grow out of it," accounts for most of these fatalities.

Occasionally, even when good drainage is the rule and under the most favorable treatment these complications may arise owing to deficiencies in the bony walls or a thrombosis of some of the smaller vessels in the region of the middle ear, antrum, zygoma or internal ear.

Children and young adults are more prone to intracranial complications due to the frequency of ear infections.

The most frequent location for an abscess to form is in the region of the temporo sphenoidal lobe, while next in frequency is the lateral lobe of the cerebellum.

The usual pathway in the cerebral abscess is either by direct extension through the roof of the middle ear (tegmen tympani) or through the antrum of the mastoid. (Tegmen antri.)

Frequently the abscess is quite a distance from the middle ear or antrum and healthy dura and brain lie between the bony walls in the region of the ear and the abscess. In these cases the abscess is due to a septic thrombophlebitis.

Now in cerebellar abscess, my own experience by operation and postmortem shows that the most frequent route of extension is from a thrombosis of the lateral sinus, which has existed for some time, forming an abscess and thus breaking down the natural barriers of the cerebellum, culminating in a cerebellar abscess. Statistics show that cerebellar abscess is caused in at least 60 per cent of the cases in the above mentioned route, while practically all the rest are caused from infection with or without erosion of the internal ear bony capsule.

I am not going to burden your minds with all the different kinds of abscesses and their subdivisions but will give a simplified classification: Abscesses of the brain are divided under two general heads, acute and chronic. These are again divided into acute without a capsule, which is the general rule, and acute with a capsule. The chronic is divided into, chronic with a capsule, which is by far the most frequent, and chronic without a capsule, which is very infrequent. I will omit tuberculosis, metastatic forms and abscess from sinuses of the nose.

SYMPTOMATOLOGY OF BRAIN ABSCESS

There are many symptoms in common due to increased intracranial pressure, but by careful analysis and examination one is generally able to differentiate. In cerebellar abscess one encounters great difficulty at times in differentiating it from suppurative labyrinthitis or from thrombosis of the lateral sinus, associated with and due to extension from the lateral

*Read before the Southeast Missouri Medical Association, October 22, 1924.

or sigmoid sinus. But here, besides the cerebellar symptoms, you find the signs and symptoms of an infection of the blood stream, such as chills or chilly sensations associated with a rapid advancing temperature, often as high as 106, and a sudden decline to 100 or 99 in six to ten hours; and frequently, though not always, a severe sweat.

SYMPTOMS OF ACUTE ABSCESS OF THE CEREBRUM

During an attack of acute suppuration of the middle ear or an acute exacerbation in a chronic suppuration of the ear, with or without mastoid symptoms, the patient complains of headaches. This pain can be located almost any place, but generally is on the side of the ear affected or, as in most of my cases, frontal in character. The headache becomes worse and worse. This is due to toxicity and from increased pressure from the displacement of brain tissue and localized edema. When this pressure becomes pronounced you have added certain other definite symptoms which, while not common to cerebral abscess alone (it occurs in cerebellar, tumor and other conditions), is almost always constant. These symptoms are: slow pulse, 40 to 60 per minute; sleepy state; slow cerebration; vomiting, and vertigo. This latter symptom is not pronounced like it is in internal ear suppuration or in abscess of the cerebellum.

Occasionally you find mental symptoms, especially in abscess in the region of the second temporal convolution on the left side. This is generally manifested by word deafness, a kind of aphasia. In one of my patients this was one of the most important symptoms and the only one in which I have seen it. In this case a large abscess was drained and the patient recovered. Patients who have slow cerebration are listless, have to be aroused and one has to speak in a loud tone to make them understand. Vomiting in cerebral abscess, while very common, is not nearly so persistent as in cerebellar abscess.

OPTIC NEURITIS AND CHOKED DISC.

While I am aware that the authorities claim this is a common symptom I found it in only a very few cases and those usually late ones, although when present on the same side as the diseased ear it should be of great diagnostic value.

Other eye signs are, hemianopsia and paralysis of some of the eye muscles (superior rectus or suboblique) and dilated pupil is of value when added to other symptoms. Frequently these eye symptoms are found in so many other conditions that one should be care-

ful about relying too much on them, unless he has other definite cerebral symptoms plus a suppurating ear.

The temporosphenoidal area being similar to the frontal, in that it is one of the great silent areas, except as stated before, the left temporal convolution (word aphasia), naturally one would not expect focal symptoms; but when such do occur they are due to pressure on the nuclei or on the nerves themselves. Sometimes those abscesses may exist for an indefinite period, so-called latent brain abscess, where the definite symptoms of abscess are wanting; but even in these there is a continuous headache of varying degree and some slight change in the mentality, such as irritability.

One great mistake made in most all these otitic brain cases is that the attending physician is generally seeking to find a definite redness or painful mastoid. While edema and tenderness of mastoid are sometimes found in acute cerebral or even cerebellar abscess, one should remember it is an exception rather than the rule and especially so in abscesses from chronic suppurations of middle ear. In a few of my cases of brain abscess there was extreme constipation, this being probably due to an enervation.

The temperature in cerebral abscess is very unreliable. I have seen several cases where the temperature was normal and in a few slightly subnormal, but most of them have perhaps a degree above normal. Of course should meningitis set in the temperature generally goes higher and in the terminal stage very high, but while high it is not so apt to have those sudden remissions to 99 or even normal as you find in thrombosis of the lateral, even if a cerebellar abscess is associated.

CEREBELLAR ABSCESS

I have already spoken of the most frequent route for the production of cerebellar abscess, i. e., a suppurating thrombosed lateral sinus with abscess or perforation of the bony capsule of the labyrinth. Here as in cerebral abscess we find the same classification which has already been mentioned. In all those so-called chronic abscesses the first symptom is headache. This is similar to the headache of cerebral abscess and may be frontal, side of head or occasionally occipital. At the beginning there is nothing to distinguish this form of headache from that of many other diseases and one should inquire particularly for suppurating ears and even examine them before dismissing the thought of a beginning brain abscess.

There is one feature of headache in these brain abscess cases which is of immense value,

that is the persistent character of the headache which becomes more severe as time goes on.

Nausea and vomiting in cerebellar abscess are very valuable symptoms and occur fairly early; the vomiting sometimes becomes projectile like that from a tumor.

Vertigo is a pronounced symptom and coupled with this symptom you have ataxia or tendency to fall, which is also common in disease of internal ear. One of the most valuable signs of cerebellar abscess is nystagmus and while it is also the most frequent sign in labyrinth disease there is considerable difference.

Nystagmus in internal ear disease is one of the first symptoms and has a tendency to improve after a short time, while in cerebellar disease there is a tendency to increase from day to day.

SPINAL FLUID EXAMINATION AS AN AID IN DIAGNOSIS

One should hesitate before doing a lumbar puncture on these suspected brain abscess cases, although occasionally I have done it and apparently with no bad effects. Should a spinal puncture become necessary as an aid to diagnosis or more properly speaking, where it is a question of an accompanying meningitis, there should never be more than ten or fifteen c.c. of fluid withdrawn. Should the fluid show it is under pressure, clear, and no bacteria (of course after you are fairly sure of an abscess), the prognosis after operation would not be hopeless. Even should it show cloudy with no bacteria or even contain staphylococci an operation is indicated with some prospect of a recovery. If the fluid shows pneumococci or streptococci the prognosis even with early operation is considered hopeless and it is a question for the surgeon whether to operate or not, although there are a very, very few cases of recovery on record and even in these there must be a question as to the correctness of the laboratory report.

Probably some of the brain abscess cases which die immediately after a lumbar puncture are not due to the compression of the medulla, but due to the sudden relief of the intraventricular pressure producing some great circulatory change in the circle of Willis.

Now since these terrible complications are caused by suppurating ears, it behooves the practitioner and specialist to consider these cases from every angle and try and cure the suppuration, first by the ordinary means and should a failure result after a few months of treatment the patient should be told of the dangers in delay and an operation advocated.

The simple mastoid operation should never be done on these chronic cases as that does not prevent intracranial complication. A radical mastoid operation (making one large cavity out of the middle ear attic mastoid antrum, removing the upper third of the posterior external auditory canal wall) and doing a plastic on the cartilaginous portion, if done properly, prevents such complications. In a few cases even after operation, suppuration will continue generally during the warm weather without any danger of brain complication occurring.

The treatment of cerebral and cerebellar abscess is of course entirely surgical. Because they are most always found close to the ear region one should begin by removing bone from the mastoid, expose the lateral sinus and if found discolored or abscessed or if the symptoms of sinus thrombosis are present, the sinus should be laid open in the usual manner and the jugular resected.

Most operators prefer to enlarge the original mastoid bone wound, excavating and removing the roof of antrum and middle ear, open the cells in the zygoma and some of the squama and inspect the dura thoroughly, as to color, lack of pulsation (pulsation does not mean there is no abscess), granulations, bulging, and if found, an incision is made of small size at first and a probe or knife-cannula inserted and if pus is found then a wider incision is made to completely evacuate it.

Should one not be fairly certain that an abscess exists it is decidedly safer not to search for it through the mastoid area, but to remove bone from the region of the ear above and behind the external meatus. The opening should be made about one-fourth inch above the upper border of the external meatus and one and one-half inches behind or posterior to it. This opening can be made as large as one wishes.

The dura opening should be very small until pus is encountered and then large enough to evacuate and drain. It has been found that gauze drains are not desirable and practically all operators now use rubber drains.

In treating a cerebellar abscess practically the same procedures are carried out as in cerebral abscess, except of course the difference in the anatomical location. Usually the abscess is close to the outer part of the lateral lobe of the cerebellum and it is not necessary as a rule to penetrate over one-half to one inch. Should the cerebellar abscess develop from an abscess thrombosed lateral sinus then the operator can explore through the lateral sinus floor, but should by all means not cut through the sinus floor, unless he is positive, otherwise, to cut through an infected sinus wall into clean

cerebellar tissue means purulent meningitis and death. Of course the operator would not think of exploring the cerebellum if he encountered a thrombosed lateral sinus and had not the symptoms of a cerebellar lesion.

The dural opening should be large enough for good drainage but no more, as here hernia is much more frequent and there is danger of meningitis from infection and from sloughing.

Opening and draining a brain abscess does not mean that a great many will recover, as frequently there is already some meningeal infection or an edema which ends fatally.

Doctor Joseph E. J. King, of New York, reported three successive recoveries after operation. A brief method of operation is as follows:

Crucial incision for frontal lobe abscess, and three-limbed incision for temporosphenoidal and cerebellar. Incision carried through to outer table of skull and flaps reflected. Trephine opening over supposed site of abscess. Small incision in dura and exploratory puncture. If pus is obtained, enlarge opening to size of about one dollar so that opening will be directly over abscess. Reflect dural flaps and insert narrow iodoform gauze packing beneath the dura to wall off the subdural space.

Repeated washing out of abscess cavity with Dakin solution for gross cleansing. Cutting away of outer wall of abscess, i. e., "unroofing" of abscess. No exploration with finger. Completion of cleansing of abscess cavity with Dakin solution, with removal of debris with light sponging and aspiration. Cover the entire area with a rubber dam beneath which Dakin tubes are placed and flush every hour. Allow abscess cavity to herniate through opening, therefore opening in skull must be of same size and placed directly over the abscess cavity. Herniation will complete on about the seventh or eighth day.

Further treatment consists of Dakinization of brain hernia every hour to q. 2. h. with a protective dressing to prevent of undue compression. Gauze strips which were inserted in the subdural space to be removed on the fourth or fifth day and scalp flaps allowed to become attached to the lateral surfaces of hernia. Intracranial pressure reduced after about the third week by one or more lumbar punctures. With proper Dakinization the hernia subsides in about 40 to 45 days, in the meanwhile the surface will become granulated and covered with epithelium.

From date of operation to complete healing of wound will be about 60 days. Keep the patient in bed about four or five weeks until the area is well fixed by adhesions so that no rupture will occur.

Do not cut away hernia, or any of it. In other words the operation consists of allowing the entire abscess cavity to herniate, or turn inside out, so that no secondary pockets will form; prevention of spreading of infection to the meninges controlled by packing off subdural space with iodoform gauze and the use of Dakin solution. Scalp plastic and cranioplasty to be done at a much later date. Four cases were operated upon consecutively in this manner and three have recovered.

The author has had no experience with this method of operating but it is evidently of great value considering there have been three successive recoveries.

Metropolitan Bldg.

SIGNIFICANCE OF THE COLLOIDAL PROPERTIES OF GELATIN IN SPECIAL DIETARIES

THOMAS B. DOWNEY, Ph.D.*

PITTSBURGH, PA.

An examination of the dietetic possibilities of gelatin from a chemico-physiological standpoint reveals a number of properties which should make this unique food product a valuable addition to special dietaries, particularly those in which milk forms the sole or major portion. In such dietaries gelatin functions as a protein food to the extent of the utilization of its amino acids by the body and in addition possesses marked activity as a protective colloid and emulsifying agent. Practical observations in clinics and hospitals as well as experimental work in laboratories indicate that these characteristic properties of gelatin as a colloidal substance exert a most significant influence in promoting digestion and absorption of certain types of foods.

The importance of this colloidal activity of gelatin where fed in conjunction with dairy products has been demonstrated by the writer in feeding tests with the albino rat. Shortly after weaning the young from several litters were divided into two groups; one group received pasteurized whole milk as its sole diet, the other pasteurized whole milk containing one per cent. of gelatin. Observations extending over a period of six months showed that the growth and physical well-being of the group fed on gelatinated milk was markedly superior to that fed on the plain milk diet. The increased growth was accomplished on smaller food consumptions. In fact, during the early growth period for equivalent gains in body weight, the animals on gelatinated milk con-

*Senior Industrial Fellow, Mellon Institute of Industrial Research, University of Pittsburgh, Pittsburgh, Pa.

seemed about 23 per cent. less food than the group on plain milk.

Another striking illustration is found in the writer's experiments with ice cream. Over a period of seven weeks it was observed that a group of rats, fed on an exclusive diet of ice cream containing one per cent. of gelatin gained no less than 25 per cent. more in body weight than was the case with their brothers and sisters whose diet was plain ice cream. For equivalent gains in body weight, the food consumptions of the group fed on the gelatin-containing ice cream were much less. Smaller percentages of gelatin resulted in proportionate improvements. It is important to note in this connection that the better nutritional status of the gelatin ice cream group after a number of months on the diet was reflected in continued health and growth, and in increased bone development and reproduction in several cases.

It should not be presumed that the observed improvements of the dairy products are due entirely to the added protein value of the gelatin, but possibly more to the protective colloidal and emulsifying effects that it confers. The digestive processes are essentially colloidal phenomena, whereby fats, carbohydrates and proteins are ingested in the colloidal conditions and changed by the various enzymes to degradation products capable of absorption by the body. To accomplish the formation of these simpler substances, the enzymes must come into intimate contact with the food particles. If, perchance, the food particles are present as large tough masses, as is the case with cow's milk coagulating under the influence of the hydrochloric acid and rennin in the human stomach, the contact surface of the enzymes with the food is limited and gastric digestion is delayed or impaired. Various specialists have described experiments in vitro as well as with humans which show that the coagulation of cow's milk by acid and rennin is prevented or modified in character in the presence of relatively small amounts of gelatin. This effect is spoken of as protective colloidal action and it is interesting to note that gelatin is one of the most efficient of all human protective agents. Gelatin is also a good emulsifying agent, and it is quite probable that it aids the secretions of the alimentary apparatus in the emulsification of fats.

In discussing the digestibility of milks, Chapin says that those animals whose stomachs form the larger percentage of the digestive tract and whose digestion is largely gastric, produce milks that form tough curds, as for example, the cow. In contrast is the human whose stomach forms only about 20 per cent. of the

digestive tract. Human milk curdles in light flocculent masses. It has been pointed out by Alexander that human milk contains a natural protective protein in large amount, which is present in small amount in cow's milk. It would seem that the addition of such a protective agent as gelatin to cow's milk would make it particularly suitable for infants, and such has been found to be the case, as is testified to in pediatric literature.¹

In like manner, gelatin has been shown to be of value in other dietaries composed largely of dairy products. For example, Hawk reports that the addition of gelatin to the milk-egg diets of tuberculosis patients resulted in decided nutritional improvements with the majority of the cases tried.

The experiments described suggest the advantages that are to be derived by the utilization of gelatin in other dietaries. The protective colloidal and emulsifying action of gelatin promotes the digestion and absorption of various types of foods. It is also misleading to assume that gelatin as a protein is of insignificant food value.

Feeding tests by McCollum and by Osborne and Mendel have shown that with certain cereal grains gelatin is exceptionally well utilized, presumably through its high content of the amino acid, by lysine. Also, with milk proteins gelatin is of value, as has been found by Sure. In combination with milk in the liquid form, it is believed, however, that the colloidal properties are of greater significance.

¹ See, for example: Jacobi, "Industrial Diseases of Infancy and Childhood," 1887, p. 79; Starr and Westcott, "Diseases of Children," 1900, 23; Griffith, "The Care of the Baby," 1908, 386; and Friedenwald and Ruhrah, "Diet in Health and Disease," 1923, 295, 466. On the utility of gelatin in chronic intestinal infection, see Herter, "Infantilism from Chronic Intestinal Infection," 1908, 101.

OPTIC NEURITIS IN INFANTILE PARALYSIS

The complication of optic neuritis in infantile paralysis may be more frequent than the number of cases reported would indicate, as ophthalmoscopic examination has probably been omitted in the majority of cases of the disease in acute or subacute stages. The visual disturbance is only transient and may be easily overlooked. In the case reported by Ralph K. Ghormley, Boston (*Journal A. M. A.*, Feb. 21, 1925), the findings in the optic disk brought about a more detailed history of the acute illness, from which was obtained the story of a transient disturbance of vision. In a routine examination of approximately 125 cases of infantile paralysis during the last twenty months, no other cases of optic neuritis have been found. Examination of thirty cases of infantile paralysis at the New England Peabody Home for Crippled Children failed to reveal any cases showing eye ground changes. In the case here reported, the changes in the optic disk have receded slowly and there remains a considerable amount of blurring of the margins, although no atrophy has occurred and the patient has no subjective eye symptoms.

THE JOURNAL

OF THE

Missouri State Medical Association

JUNE, 1925

EDITORIALS

THE KANSAS CITY MEETING

Members from all sections of the state attended the sixty-eighth annual meeting of the Association at Kansas City, May 5-6-7, and numerous comments were freely expressed, praising the session as probably the most successful that we have ever held. The clinical sessions at the General Hospital attracted large numbers of the members and all of them praised the character of the work done. The afternoon sessions drew a much larger attendance than we have noticed for many years. Even the last day of the meeting, which is ordinarily regarded as a cold affair, held over two hundred members in their seats from two o'clock until five, ardently interested in the papers on obstetrical problems. An unannounced subject of great interest to the members was the exhibition by Dr. W. C. Gayler, of St. Louis, of a specimen of Siamese twins. These had been born at the City Hospital in St. Louis just a day or two before the date of our meeting, giving Dr. Gayler an opportunity to show them to the members in attendance at the Kansas City meeting.

The plan of having the House of Delegates meet and transact its business on the day preceding the opening of the scientific sessions was generally commended, not only by the delegates but by the members who are anxious to attend the scientific sessions. The House of Delegates felt that it had plenty of time to attend to its work and did so with deliberation and voluminous and animated discussion. The question of raising the dues to \$10 was thoroughly discussed. The members of the House realized that the work of the organization could not be extended with the annual dues at \$5 and the attempt to increase the funds in the treasury by voluntary subscriptions was acknowledged to be a failure. The Association ought to be in position to assist the county medical societies in maintaining active and effective organizations by sending to the counties speakers and instructors from time to time at the expense of the Association.

The necessity for a legislative fund is fully realized by all members and our work of instructing the people in hygiene and preventive medicine could not be undertaken without the expenditure of money.

After a full and free discussion that lasted several hours, the motion prevailed increasing the dues from \$5 to \$8, beginning with January, 1926.

An amendment to the constitution was adopted which will permit the president or secretary of a county medical society to act as the delegate when the society is otherwise not represented.

The House of Delegates adopted a resolution addressed to President Coolidge and the Secretary of the Treasury, asking for relief from the war tax under the Harrison Narcotic Act and for deduction from the income tax of money expended in attending medical society meetings and doing post-graduate work. The American Medical Association is endeavoring to have the discrimination against physicians in both these respects removed.

The absence of Dr. J. Franklin Welch, our treasurer, who died April 24, was commented upon by practically all the members. In his memory an hour was set aside for addresses upon his life by those who knew him best. The president called upon the following members, who responded with words of love and appreciation for one who has been faithful and diligent and attentive to the work of the organization for many years: Dr. D. A. Barnhart, Huntsville; Dr. G. Wilse Robinson, Kansas City; Dr. A. R. McComas, Sturgeon; Dr. W. H. Breuer, St. James; Dr. M. P. Overholser, Harrisonville.

The council elected Dr. George W. Hawkins, of Salisbury, to succeed Dr. Welch as treasurer.

The Association was honored by the presence of two guests, Dr. Morris Fishbein, Chicago, editor of the *Journal of the American Medical Association*, and Dr. John M. Dodson, secretary of the Bureau of Health and Public Instruction of the American Medical Association. Dr. Fishbein gave us a most entertaining and instructive address entitled "Mirrors of Medicine" and Dr. Dodson explained the efforts of the American Medical Association to encourage our Association in having its members instruct the people upon the importance of periodic health examinations of the apparently well.

The Woman's Auxiliary held its first annual meeting and over a hundred were registered in that body. The presence of the wives and daughters of the members of the Association was a welcome break in the ordinary routine

of our medical meetings. The women were quite effective in making the president's reception much more attractive than it has been in the past and the attention given the president by many of the members, who formed in line to shake hands with him, was an enjoyable diversion.

The election of Dr. Emmett P. North, of St. Louis, as president for the ensuing year, was a popular choice. His work during the past several years as president of the state board of health and member of the committee on scientific proceedings, and his prominence in professional and lay affairs, were reviewed in the nominating speech made by Dr. W. H. Breuer, St. James, and by Dr. H. S. McKay, of St. Louis, who seconded the nomination. There was no opposition to his candidacy and he was elected by unanimous vote. The other officers elected are: First vice president, E. A. Dulin, Nevada; second vice president, H. W. Carle, St. Joseph; third vice president, C. H. Dixon, Moberly; fourth vice president, A. R. Rowe, Poplar Bluff; fifth vice president, C. B. Trader, Sedalia; secretary-editor, E. J. Goodwin, St. Louis; treasurer, G. W. Hawkins, Salisbury; councilors: third district, F. H. Broyles, Bethany; sixth district, J. S. Gashwiler, Novinger; eighth district, B. P. Wentker, St. Charles, (reelected); eleventh district, J. H. Timberman, Chillicothe; thirteenth district, George E. Bellows, Kansas City, (reelected); nineteenth district, W. A. Clark, Jefferson City; twentieth district, W. H. Vogt, St. Louis; twenty-first district, T. F. Estel, Altenburg, (reelected); twenty-second district, G. S. Cannon, Farnfelt; twenty-ninth district, R. L. Wills, Neosho, (reelected).

The delegates from St. Louis presented a cordial invitation from the St. Louis Medical Society, the St. Louis Clinics, and other medical bodies in St. Louis, the Mayor and the Convention Bureau, for the Association to meet in St. Louis in 1926. This invitation was not contested by the members from any other section of the state and St. Louis was selected by unanimous vote.

The number registered was 505, which exceeds the largest registration of any previous meeting. There were many more than this number attending the meeting, particularly members of Jackson County Medical Society and nearby territory who attended the sessions but did not register.

The Jackson County Medical Society and the Jackson County Woman's Auxiliary provided entertaining social features that were enjoyed by all who attended the meeting. For the women there was a drive over the city's beautiful boulevards, which terminated at the

Mission Hills Country Club where the women were entertained with a musicale and tea. In the evening of the last day of the meeting the visiting members' wives and daughters were entertained with a theater party at the Orpheum Theater. The president's reception was followed by a musicale and tea. A smoker with boxing bouts and refreshments at the Baltimore Hotel on Thursday evening, was an entertaining and amusing affair.

DEATH OF DR. J. FRANKLIN WELCH

On Thursday, April 24, Dr. J. Franklin Welch, well beloved of thousands of physicians in Missouri and elsewhere, for 27 years treasurer of our association and president of the association in 1916-17, died at his home in Salisbury, aged 68 years.

He had been ill for a number of months with an endocarditis and for quite a long time before he consented to stay at home and rest, he made calls and attended to the work of the organization in spite of his weakened condition. The cause of his death was an acute exacerbation of a chronic endocarditis.

He was buried on Saturday, April 26, at Paris, Mo. He is survived by his widow, a son, Mr. McNutt Welch, of Salisbury, and a daughter, Mrs. J. A. Brittenham, of Oklahoma City.

In our July issue we will have an extended account of the life of Dr. Welch and the encomiums paid him at the annual meeting in Kansas City last month.

THE GOLF TOURNAMENT AT KANSAS CITY.

The Missouri State Medical Golf Tournament was held at Kansas City during the session of the annual meeting of the State Medical Association with the Jackson County Medical Golf Association acting as hosts for the members taking part in the tournament at the Kansas City Country Club.

The eighteen hole championship medal was won by Dr. Kerwin W. Kinard, Kansas City, with a medal score of 81. The runner up score was a tie between Dr. John Q. Chambers, Kansas City, and Dr. R. C. Lounsberry, Springfield, each of whom played the course in 85.

The handicap tournament was a tie between Drs. A. J. Welch, Kansas City, and Kerwin W. Kinard, Kansas City, with a net score for 18 holes of 67. Dr. Wm. Leroy Kenney, St. Joseph, was runner up with a score of 68.

The blind hole contest was won by Dr. An-

drew W. McAlester, Kansas City, and the highest gross score was won by Dr. Hermon Major, of Kansas City, with a score of 130.

Prizes were donated by the following business houses of Kansas City to whom acknowledgment with sincerest appreciation and thanks is made: Hettinger Brothers, Silver Cup; Spaulding & Co., golf club; Browning, King & Co., 1 dozen golf balls; W. M. Federman & Co., 50 cigars; Hugo Brecklein, 50 cigars; Snodgrass Drug Co., new golf safety razor and case (Gillette); Elliott & Co., 1 gold medal fob; Rothchilds & Co., 1 rain-proof vest; Schmelzer & Co., 1 sweater, 1 thermometer.

It is noticeable that in this tournament there were only a few members from outside of Kansas City taking part in the tournament. This absence of many golf enthusiasts from other parts of the state was due to the tournament being held on the last day of our meeting. At the meeting of the club following the tournament, this matter was thoroughly discussed and it was decided to hold the tournament in the future on the first day of the scientific proceedings of the State Medical Association. Undoubtedly this change in the date will attract a larger number of visiting members who enjoy the game. An effort will be made to arrange the scientific program so that the Golf Tournament will not interfere with the attendance at that session.

At the dinner following the tournament at Kansas City there were 41 members present.

The organization of the Missouri State Medical Golf Association was effected at the Kansas City Tournament and the following officers were elected: President, Fred W. Bailey, St. Louis; vice-presidents, R. C. Lounsberry, Springfield; W. L. Kenney, St. Joseph; A. M. Gregg, Joplin; Kerwin A. Kinard, Kansas City; W. A. Clark, Jefferson City; secretary and treasurer, A. J. Welch, Kansas City.

THE SCORE

	Handi-		
	Gross	cap	Net
Kinard, K. W., Kansas City.....	81	14	67
Welch, A. J., Kansas City.....	93	26	67
Kenney, W. L., St. Joseph.....	86	18	68
Capell, C., Kansas City.....	93	24	69
Lounsberry, Ray C., Springfield...	85	15	70
Chambers, J. Q., Kansas City.....	85	14	71
Willetts, F. L.....	95	24	71
Seehorn, N. A., Kansas City.....	98	27	71
Hamilton, H. D., Kansas City.....	98	27	71
Clark, W. A., Jefferson City.....	86	14	72
Robinson, G. W., Kansas City....	89	17	72
Williams, Delon, Kansas City.....	94	22	72
Kyner, T. A., Kansas City.....	95	22	73
Poorman, B. A., Kansas City.....	100	27	73
Holbrook, Ralph W., Kansas City..	92	18	74
McAlester, Andrew W., Kansas City	96	22	74

	Handi-		
	Gross	cap	Net
Clark, H. M., Platte City.....	99	25	74
Redman, S., Platte City.....	101	27	74
Twyman, E., Kansas City.....	104	30	74
Tesson, N. A., Kansas City.....	100	23	77
Fields, Tom, Kansas City.....	101	24	77
DeVilbiss, E. F., Kansas City.....	92	14	78
Mather, H. F., Kansas City.....	105	27	78
Snider, Sam, Kansas City.....	97	18	79
McPherson, Owen P., Kansas City	97	18	79
Bradford, O. F., Kansas City....	99	20	79
McCallum, Francis M., Kansas City	100	20	80
Kyger, Fred B., Kansas City.....	106	26	80
Tesson, James A., Kansas City....	103	22	81
Jackson, Jabez N., Kansas City....	111	30	81
Frischer, Julius, Kansas City.....	106	24	82
Cantrell, C. D., Kansas City.....	103	20	83
Skooeg, Andrew L., Kansas City....	105	20	85
Gregg, A. M., Joplin.....	105	18	87
Simpson, J. Y., Kansas City.....	113	27	86
Hershey, Lynn, Kansas City.....	116	30	86
Painter, A. M., Kansas City.....	122	26	96
Major, Hermon S., Kansas City..	134	30	104
Yazel, H. E., Kansas City.....	102	..	..
Hamilton, Eugene P., Kansas City..	104	..	..

GROUND BROKEN FOR NEW BUILD-
ING OF ST. LOUIS MEDICAL
SOCIETY

On Tuesday, May 19, Dr. Fred W. Bailey, president of the St. Louis Medical Society, turned the sod that started the construction of the magnificent new structure which the St. Louis Medical Society will erect on ground purchased some time ago for its new home. The location is an ideal one for a building devoted to the science of medicine, situated on Lindell Boulevard just west of the Moolah Temple.

The building to be constructed at this time will house the library and provide an auditorium seating about four hundred people, another seating about two hundred and rooms for the clerical force. The construction of this building will be completed within a year. A large auditorium to seat about two thousand people will be constructed at a later date.

The beginning of the building is the culmination of labors on the part of members of the St. Louis Medical Society during the past three years. The raising of funds has been, of course, a slow process, since donations were solicited in the beginning only from members of the medical society and very few large contributions were received. The building committees and the various administrations did not lose hope although confronted with discouraging conditions on numerous occasions, and when the committee was authorized to solicit funds from sources outside the medical society several large contributions were received and many members increased the

amount of their donations, stimulated by a donation of \$50,000 by Mrs. Sarah L. G. Wilson, one by Dr. and Mrs. Frederick E. Woodruff of \$10,000, and another by Dr. Percy H. Swahlen of \$7,500 as a memorial to his uncle, Dr. Benjamin M. Hypes. The total sum that was originally made the goal was \$300,000 and \$200,000 of this sum has been subscribed. With this amount of money in sight the society decided to proceed with the erection of that portion of the building most important for the preservation of its records and the library, deferring the erection of the large auditorium until the entire amount has been collected.

The medical profession of St. Louis is to be highly congratulated upon its activity in this undertaking. With a modern home constructed to meet the needs of a large medical society there can be no doubt about the interest of the members in the activities of the society. The St. Louis Medical Society has large opportunities for advancing the work of the profession of that city, not only in the science itself but in its work of informing the public of the real purposes of medicine as a science and as an art and attract the respect and the confidence of the people in the profession as a whole and in the individual practitioner who is a member of the organized medical body.

At the ground breaking there were about two hundred members of the society gathered to witness the ceremony which Dr. Bailey declared would be a simple affair and which was indeed not lengthy. Every member present, however, was imbued with the enthusiasm of the occasion and the ceremony was a most inspirational one.

MORE LICENSES REVOKED BY THE STATE BOARD OF HEALTH

The state board of health resumed the trials of physicians cited to show cause why their licenses should not be revoked, on May 11, at St. Louis, and continued in session during the week. The board revoked the licenses of the following: A. M. Ecklund, St. Louis, head of the Lister Pathological Laboratory and connected with the out-patient clinic of the Washington University Medical School, found guilty of having made false affidavits in obtaining his license; F. W. Brownfield, of Crocker, Mo. and St. Louis, and Spurgeon H. Barnett, of St. Louis, city bacteriologist, found guilty of making fraudulent statements; Walter E. Abels, St. Louis, guilty of a similar charge. The license of Wm. T. Zeitler, of

St. Louis, was suspended on a similar charge. The charges against Alonzo G. Hobbs, St. Louis; Clarence L. Hobbs, St. Louis; Loren A. Glasco, Whitewater; Nicholas J. Scottelaro, St. Louis; Cyril H. Rogers, St. Louis; W. M. Koutsoumpas, St. Louis; Fred J. Killalee, St. Louis; Oscar R. Bullard, St. Louis, were dismissed. The charges against J. A. Grosskreutz, St. Louis County, were continued indefinitely.

NEW CHRISTIAN HOSPITAL IN ST. LOUIS

The new Christian Hospital in St. Louis, with a capacity of 140 beds, is rapidly nearing completion. The architects, Hoener, Baum & Froese, are making every effort to have the building ready for occupancy some time in July.

The hospital is a handsome four story and ground floor structure, built T shape, and is modern in every respect. Some of the special features are, a large sun parlor on each floor, running water in every room, no ceiling lights in the rooms, Terrazzo floors throughout, and a system of chimes to call the physicians and officers of the hospital. The hospital will be a general hospital with a maternity department.

The hospital is built on a high point in north St. Louis, near O'Fallon Park, with good street car and bus accommodations. The grounds comprise over four acres and the building has been so constructed that enlargements may be made to the best advantage.

The hospital will fill a long felt want in north St. Louis, that portion of the city with a large population having been without adequate hospital facilities for a long time.

The old Christian Hospital building long ago outgrew its quarters at Grand and Palm Street, where it has been located since 1914. Recently some of the influential business men of north St. Louis joined forces with the trustees and staff and have made it possible to build. The building with grounds and equipment will cost approximately \$400,000.

A training school for nurses, approved by the nurses' association, has been conducted by the Christian Hospital for a long time and will be a feature of the new hospital.

Dr. J. Clay Heinrichs is chief of the staff and Miss Elizabeth Gill, formerly superintendent of the Rebekah Hospital, is superintendent of the hospital and for the present acting as superintendent of the training school for nurses.

THE LESLIE DANA MEDAL

Preliminary to the opening, May 21, of an intensive local campaign for conserving sight, a medal for the most outstanding achievement in the prevention of blindness during the last year was awarded at a meeting of the Ophthalmic Section of the St. Louis Medical Society at the Hotel Coronado, May 20. The award was established by a St. Louisian, Leslie Dana, retiring member of the Missouri Commission for the Blind, and the work for which it is bestowed is of a nature deserving expressions of public gratitude.

How much is possible in the prevention of blindness is indicated by the records of the commission, which are said to show that no less than 2000 of Missouri's 6000 blind are needlessly blind. That is, with better knowledge of the means of preventing the loss of sight now known to science, with greater care by the individual or more skillful medical treatment, these 2000 blind people, or a very great many of them, at least, might now be able to see. And there must be many others whose vision is seriously impaired who could have avoided that impairment had they or their friends known how. Both in the discovery of new ways of saving sight and in extending education in the old ways, there is a field of the most highly valuable endeavor.

So pitiful is the condition of the totally blind person that it would seem that there might be much more concern at all times in the saving of sight, such concern that better lighting would be provided in the many places where it is needed and that the very first symptoms of failing vision would in no case be ignored. By centering interest in the prevention of blindness, the Dana medal, recognizing a splendid achievement in one of the most important of public health efforts, will itself lend valuable aid to the movement for better sight.—*St. Louis Globe-Democrat*.

NEWS NOTES

Dr. Robert Glynn, Springfield, has sailed for Europe, where he expects to remain for two months doing post-graduate work.

Dr. Martin F. Engman, St. Louis, has been elected chairman of the section on medical measures of the American Social Hygiene Association.

Dr. I. D. Kelley, Jr., St. Louis, has moved his offices to 1222-28 Missouri Building. His

practice is limited to disease of the ear, nose and throat, bronchoscopy and esophagoscopy.

The annual conference of Missouri health officers and public health nurses was held at Jefferson City, May 20, 21, and 22. The address of welcome was delivered by Governor Baker. Dr. H. S. Gove, of Linn, is president of the conference.

Mrs. J. S. Halstead, 96 years old, wife of Dr. Joseph S. Halstead, oldest living physician, died at her home in Breckenridge, Mo., April 26. She was a niece of former-Governor Wycliffe, twice governor of Kentucky. Dr. Halstead was 107 years old, March 4.

Governor Baker reappointed the following members of the State Board of Health: James R. McVay, Kansas City; H. L. Kerr, Crane; James Stewart, St. Louis; Cortez F. Enloe, Jefferson City. Dr. Stewart is the secretary of the Board and State Health Commissioner, and will make his headquarters at Jefferson City. The terms of these members will expire April 18, 1929.

Dr. George F. Dick, Chicago, was the guest of the St. Louis Medical Society, April 14, and delivered an address on scarlet fever. Over four hundred members of the society listened to Dr. Dick's exposition of his work in developing the Dick test for scarlet fever, and many of the members were unable to hear him because of lack of room in the auditorium.

Another member of the eleemosynary board, Mr. Charles E. Rendlen, of Hannibal, has resigned as a protest against political appointments in the eleemosynary institutions. His successor has not yet been appointed. At the meeting of our Association in Kansas City, May 5, 6, and 7, a resolution was adopted protesting against the spoils system being re-introduced in the eleemosynary institutions.

Dr. R. Emmet Kane, St. Louis, has been elected president of a new organization in that city named the St. Louis Association of Hospitals. Dr. George M. Tuttle was elected vice-president and Miss Isabelle Baumhoff, secretary and treasurer. The organization is composed of twenty-six of the recognized standard hospitals in St. Louis and its purpose is to promote the medical, social and scientific development of the hospitals.

The Jackson County Medical Society is preparing to move into its new quarters in the

Medical Arts Building at Kansas City. This building was erected for the special use of physicians and dentists recommended by the Jackson County Medical Society and space has been donated to the Jackson County Medical Society for the use of its library, auditorium and business office for the period of fifteen years, with a provision for an extended period if desired.

The Arcadia Valley Hospital is the name of a hospital being erected at Ironton. Under the stimulating influence of Dr. R. W. Gay, of Ironton, this hospital will serve a large number of people in the southeast section of the state and fill a need that has been apparent for a long time. The building of the hospital was made possible by the generosity of a man and his wife, residents in Arcadia Valley, and the cooperation of the people. It is expected the hospital will be finished by the first of June.

The American Urological Association held its annual meeting in St. Louis, May 21, 22, and 23 with headquarters at the Chase Hotel. The mornings were devoted to clinical meetings at the various hospitals, the afternoons to the readings of papers. Among those on the program to read papers were: Drs. N. F. Ockerblad, Ernest G. Mark, Kansas City; Arthur L. Chute, Boston; Ernest M. Watson, Buffalo; Ben A. Thomas, Philadelphia; Louis E. Schmidt, William T. Belfield, Chicago. Dr. Herman L. Kretschmer, of Chicago, is president of the Association. The annual banquet was held at the Chase Hotel on the evening of May 22.

Announcement is made that a new office building for physicians will be erected in St. Louis near the Grand Avenue medical center but sufficiently removed from Grand Avenue to avoid much of the noise and disturbance caused by the heavy traffic, and provide parking facilities for the automobiles of the physicians and their patients. Eight physicians, it is reported, have formed a company to erect the building and every occupant will be a part owner of the structure. It is to be located on Washington Avenue near Spring Avenue, on a plot of ground fronting 140 feet on Washington Avenue with a depth of 233 feet to an alley. It is said that sufficient subscriptions have been made to insure the success of the project.

Dr. Barney Brooks, of St. Louis, associate professor of clinical surgery at Washington University Medical School, will sever his connection with that institution in the fall and go

to Nashville, Tennessee, where he will take charge of the department of surgery in the Vanderbilt University, having accepted the offer of the university to become head of the department. He is the second member of the faculty of Washington University Medical School to accept a position on the staff of the Vanderbilt University, Dr. G. Canby Robinson having accepted the deanship of the school some time ago. Dr. Brooks received his education at the University of Texas and graduated in medicine from the Johns Hopkins Medical School in 1911. In 1913, after a year's internship, he moved to St. Louis to practice and was appointed instructor of surgery at Washington University Medical School.

On May 11 the State Board of Health resumed the trial of physicians said to be holding licenses obtained through fraud and other irregular means. The board dismissed the charges against Doctors Alonzo G. Hobbs, St. Louis, Clarence L. Hobbs, St. Louis, and Loren A. Glasco, Whitewater, Mo. The charges against the Hobbs brothers were that they had attended the St. Louis College of Physicians and Surgeons for only three years instead of four years, as represented by them in their application for license and the charge against Dr. Glasco was of a similar nature. The evidence submitted to the board seemed to prove that they had attended the required number of years.

The license of Dr. A. M. Ecklund, St. Louis, was revoked after the board had found him guilty of making a false affidavit in obtaining his license. Charges against the following were dismissed for lack of proof that any fraud had been perpetrated on the board: Nicholas J. Scottolaro, Cyril H. Rogers, W. M. Koutsourpus and Fred J. Killalce.

Dr. J. F. Bredeck, of St. Louis, tuberculosis controller for the city, was the guest of honor at a luncheon given by the St. Louis Tuberculosis Society, May 15. Dr. Bredeck has resigned as tuberculosis controller and will sail for Europe where he expects to remain for about two years, spending the time in the study of tuberculosis work. In his talk to the tuberculosis society, Dr. Bredeck called attention to the inadequate provisions made by the city for the care of tuberculosis patients, notwithstanding the fact that wonderful improvements have been made during the past few years by the city to give these patients modern and efficient care and treatment. "Koch Hospital is ideally situated for a sanatorium," Dr. Bredeck said, "and the facilities for the care of these patients have been ad-

vanced to a remarkable extent but the hospital still lacks capacity for the number of patients that ought to be received at the institution. At present Koch Hospital can accommodate 385 patients and there are about 90 on the waiting list. According to the standard laid down by the National Tuberculosis Association, a city the size of St. Louis should provide at least 1,000 beds for its tuberculosis cases."

Other guests at the luncheon were Mr. Harry Salisbury, newly appointed Director of Public Welfare, Dr. G. A. Jordan, Hospital Commissioner, and Dr. Max Starkloff, Health Commissioner.

When the Kansas City Obstetrical Society first came into existence, it was organized as a section of The Jackson County Medical Society and immediately became a very active body with quite a large and interested membership. Regular meetings were held and twice yearly there was an open meeting before the general society at which time there was usually an invited guest from the outside who was prominent in this branch of medicine.

Being a section of the society, naturally only members of the latter were eligible for membership and as a number of men from adjacent territory expressed a desire for active membership, it was finally decided to withdraw as a section, thus making outside members possible. Unfortunately the requirements and qualifications were also changed at this time so that many of our own men felt that they were automatically excluded and for this reason have lost interest and dropped out, leaving only the very few obstetricians "to carry on."

The fact is that these obstetricians do only a small part of the work every year, the bulk of it being in the hands of the general practitioners, a very great many of whom are doing most excellent work. We know this to be true because we see it every day in the hospitals. We also know that these men, having a large experience, are able to take an active part in an obstetrical society and can contribute many valuable things in the way of original papers, case presentations, etc.

The present Obstetrical Society is now being reorganized and every man who is a member of his county society, either this or an adjacent county, Missouri or Kansas, who is doing any obstetrics and is really interested in the work and its advancement, will be welcomed into the reorganized society.—*Bulletin Jackson Co. Med. Society.*

Dr. Harvey S. McKay, secretary of the St.

Louis Clinics, a section of the St. Louis Medical Society, in his annual report, gives some interesting data concerning the activities of the clinics. He says:

"The St. Louis Clinics have been in operation for five years and four months. At the last annual meeting we had one hundred thirty members, this year we have one hundred thirty-two.

"During the past year we have had one hundred seventy-four registrants from thirty-four states. The largest number have come from the state of Missouri, second from Illinois, third from Texas and fourth from Indiana.

"Since February, 1925, we have scheduled in the daily bulletin nine thousand, eight hundred forty-one clinics.

"Two special courses were given May 26 to June 7, an intensive course in internal medicine of two weeks duration, and a series of clinical conferences in oto-laryngology and ophthalmology covering a period of one week. These courses were attended by fifty-eight physicians from various sections of the country.

"During the past year one thousand five hundred circular letters and bulletins have been mailed to physicians in surrounding territory, in addition a bulletin has been mailed to each member of the St. Louis Medical Society once each month.

"The board of directors has met eleven times. Regular meetings are held monthly.

"The Section has furnished the St. Louis Medical Society with eight programs for the Tuesday evening scientific meetings. The average attendance at these meetings was 79.

"Advertising has been carried for the entire year in the following journals: Missouri State Medical, Arkansas Medical, Illinois Medical, the Southern Medical and the Journal of the American Medical Association.

"Two hundred twelve letters of inquiry have been received during the year, one hundred fifty of these were for special courses."

The following articles have been accepted:
Cook Laboratories

Streptococcus, Vaccine X Plain

Acne Vaccine (Cook) Combination X

Typhoid Vaccine X Plain

Typhoid Vaccine XX Combined

Whooping Cough Vaccine (Cook) X Plain

Staphylococcus Vaccine Combined

Cutter Laboratories

Rabies Vaccine (Semple)—Cutter

Eastman Kodak Company

Resorcinol Monoacetate

Hille Laboratories

Lunosol

Lunosol Capsules, 6 grains.

Hynson, Westcott and Dunning

Brom-sulphalein—H. W. D.

Solution Brom-sulphalein—H. W. D.

Eli Lilly and Co.

Scarlet Fever Streptococcus Antitoxin (Unconcentrated)

Scarlet Fever Streptococcus Antitoxin (Concentrated)

H. K. Mulford Co.

Ash Tree Pollen Extract—Mulford; Bermuda Grass Pollen Extract—Mulford; Box Elder Pollen Extract—Mulford; Canary Grass Pollen Extract—Mulford; Cocklebur Pollen Extract—Mulford; Corn Pollen Extract—Mulford; Cottonwood Tree Pollen Extract—Mulford; Daisy Pollen Extract—Mulford; Dandelion Pollen Extract—Mulford; Dock Pollen Extract—Mulford; False Ragweed Pollen Extract—Mulford; Goldenrod Pollen Extract—Mulford; Johnson Grass Pollen Extract—Mulford; June Grass Pollen Extract—Mulford; Lamb's Quarters Pollen Extract—Mulford; Maple Pollen Extract—Mulford; Marsh Elder Pollen Extract—Mulford; Mountain Cedar Pollen Extract—Mulford; Mugwort Pollen Extract—Mulford; Oak Tree Pollen Extract—Mulford; Orchard Grass Pollen Extract—Mulford; Perennial Rye Grass Pollen Extract—Mulford; Plantain Pollen Extract—Mulford; Redroot Pigweed Pollen Extract—Mulford; Redtop Pollen Extract—Mulford; Russian Thistle Pollen Extract—Mulford; Rye Pollen Extract—Mulford; Sagebrush Pollen Extract—Mulford; Sugar Beet Pollen Extract—Mulford; Sunflower Pollen Extract—Mulford; Sweet Vernal Grass Pollen Extract—Mulford; Walnut Tree Pollen Extract—Mulford; Western Ragweed Pollen Extract—Mulford; Wormwood Pollen Extract—Mulford.

Sharp and Dohme

Caprokol (Hexylresorcinol—S. and D.)

Frederick Stearns and Co.

Insulin—Stearns Single Strength

Insulin—Stearns Double Strength

Insulin—Stearns Quadruple Strength

E. R. Squibb and Sons

Lentil-Allergen-Squibb

United States Standard Products Co.

Scarlet Fever Streptococcus Antitoxin—
U. S. S. P.

OBITUARY

STOCKLY P. TOWLES, M.D.

Dr. Stockly P. Towles, of Moberly, a graduate of the College of Physicians and Surgeons, Keokuk, Iowa, 1898, died April 23, 1925, aged 51 years.

Dr. Towles had taken the oath of office as Mayor of Moberly and had addressed the City Council just the night preceding his death, and while he had been extremely nervous no grave thought was attached to his condition, his friends attributing it to the strain incidental to assuming his new duties. He had answered a call in the early morning hours and was answering a second call when he was stricken. He was found unconscious, sitting in his car which had run into a ditch at the side of a country road. He was removed to a local hospital and died a few hours later.

Dr. Towles had been a member of Randolph County Medical Society for nearly twenty years and at the time of his death was filling the office of censor for that body.

The following resolutions on the death of Dr. Towles were adopted by the Randolph County Medical Society:

WHEREAS, Dr. S. P. Towles, one of our best known and most influential members, has been called by the Great Physician of the Universe from his earthly career and from our midst to membership in the celestial society above, and to the enjoyment of his reward for a life well spent; and,

WHEREAS, He was for many years an active and loyal member of the Randolph County Medical Society and was at the time of his death mayor of the city of Moberly, and by reason of his ability, patience, skill and sympathy as a physician, and his zeal, integrity, industry, unselfish service and patriotism as a citizen, he reflected honor and credit on the medical profession of which he was a member and his life and influence were for the betterment and upbuilding of his profession and the city of Moberly in which he lived, and he earned for himself the respect, esteem and confidence of the citizens of Moberly, and

WHEREAS, His memory should by this society be cherished, his virtues by its members emulated, his able, honest and unselfish service to his city be recognized, and the record of his good deeds and his exemplary life be spread upon the records of this society, therefore be it

Resolved, By the Randolph County Medical Society, that in the death of our esteemed associate, Dr. S. P. Towles, it has suffered an inestimable loss; that he was a faithful and valued member of this society; that he was a patriotic, honest, unselfish and zealous citizen; that he merited the honors conferred upon him; and that he was worthy of every important trust with which he was invested and preserved unsullied the reputation of the medical profession, and be it further

Resolved, That he was a considerate, patient, kind and indulgent father; loyal, affectionate, devoted husband; a true, loyal friend; a man of high ideals;

a patriotic, public spirited and honorable citizen; and be it further

Resolved, That the members of the Randolph County Medical Society deeply deplore the death of our beloved member and friend and esteemed citizen; that we do hereby extend to his bereaved family and friends our heartfelt and profound sympathy; and be it further

Resolved, That these resolutions be spread upon the minutes of this meeting of the Randolph County Medical Society as a memorial of our respect, love and esteem for our departed member; and that a copy be sent to his bereaved family and a copy be sent to the *Journal of the State Medical Society* and the press of this city.

Respectfully submitted,

G. O. CUPPAIDGE,
C. B. CLAPP,
MOSS R. NOLAND,
Committee.

STEPHEN HOOD RAGAN, M.D.

Dr. Stephen Hood Ragan, who was born September 3, 1864, in Tarrant County, Texas, died at St. Joseph Hospital, Kansas City, April 22, 1925, from complications following influenza. He had been confined to his bed since February 22.

Dr. Ragan's grandfather, Jacob Ragan, was one of the pioneers of the Kansas City Town Site Company.

Dr. Ragan's home and office was on the site of the original homestead of his father, Stephen H. Ragan, and he had lived in the same home since six years of age, when his father returned to this county after a residence of a few years in Texas.

Following his preliminary education in the public schools of Kansas City, he took a business course in Spalding's Business College, and later took up the study of medicine in the Kansas City Medical College, graduating in 1894, at the same time working in the Kansas City Postoffice.

After several months of post-graduate work in Chicago, Dr. Ragan commenced the practice of medicine, doing most of his work at St. Joseph's, St. Mary's and St. Vincent's Hospitals.

Dr. Ragan's grandfather was a veteran of the War of 1812 and his father a captain in the Civil War, and later was elected Surgeon-in-Chief of the United Confederate Veterans, to which office Dr. Ragan was elected in 1923, being the first son of a Confederate veteran to succeed his father in office.

Dr. Ragan was a Major in the Medical Reserve Corps during the World War. He had been very active in Masonic work for over twenty-five years, and was a member of the Modern Woodmen of America, and Modern Brotherhood of America, serving in many offices and committees, especially in all charitable work.

Dr. Ragan has been a member of the Jackson County Medical Society since 1907, and was a member of the Missouri Medical Association and a Fellow of the American Medical Association.

He is survived by his widow, Mrs. Bertha Ragan; two sons, Dr. W. H. Ragan, of this city, and Dr. Stephen T. Ragan, of Moberly, Missouri, and a daughter, Mrs. Frank Robinson, of Independence. The members and officers of this society extend to them the deepest sympathy.—*Bulletin Jackson County Medical Society*.

FREDERICK H. BRUNIG, M.D.

Frederick H. Brunig was born near Hanover, Germany, in 1862, and died in Kansas City, April 8, 1925, at the age of sixty-three. He came to this country at an early age, graduating from the Kansas City Medical College in 1894. Following his internship in the Kansas City hospitals he took post-graduate work in Columbia University, New York City.

Dr. Brunig joined the Jackson County Medical Society in 1904 and has always been a consistent and active member in this society and the Missouri State Medical Association and was a Fellow of the American Medical Association. He was a member of the staff of the St. Joseph Hospital for twenty-five years, and the staffs of St. Mary's Hospital and the Providence Hospital, Kansas City, Kansas.

Although foreign born, Dr. Brunig was a loyal citizen of the United States and was commissioned as first lieutenant in the Medical Reserve Corps, but was called into active service only two days before the Armistice was signed.

Dr. Brunig was kind and sympathetic, loved by all of his patients. He was an independent thinker and a hard worker, never too tired to attend any sick call, especially among the poor and needy. He was not only an earnest student in his professional work, but was interested and active in civic affairs.

Dr. Brunig is survived by his widow, Mrs. Roberta Dennison Brunig; two sons, Frederick H. Brunig, Jr., and Edward Brunig; two daughters, Mrs. Eugene H. Ferguson and Miss Helen Diantha Brunig, of the home address; four sisters, Mrs. George Lord and Mrs. George Downer, of Sheridan, Wyoming, Mrs. Minnie Youngan, Phoenix, Arizona, and Mrs. Christian Yungman, West Point, Illinois; and two brothers, Dr. Henry Brunig, Los Angeles, and Dr. Conrad Brunig, Lehigh, Kansas.

The Jackson County Medical Society desires to express their sympathy to the widow, sons, daughters and relatives of Dr. Brunig.—*Bulletin Jackson County Medical Society*.

MORGAN LELAND CLINT, M.D.

WHEREAS, The Supreme Ruler of the Universe has seen fit to take from our midst our esteemed brother, Dr. Morgan Leland Clint, a graduate of the Medical Department of the University of Missouri, 1908; past president of the North Missouri Medical Association; member of the Missouri State Medical Association; Fellow of the American Medical Association and a member of the medical corps of the United States army who saw service over-seas in the World War, and who died at his home in Breckenridge, Thursday evening, April 23, 1925, after a short illness; therefore be it

Resolved, That the members of Caldwell County Medical Society take this means of expressing to the beloved wife and son their deep sympathy and bringing to them the assurance that we share with them their great loss, and be it

Resolved, That we give assurance of the high regard in which Dr. Clint was held by the members of this society who recognized in him the skilled physician, the public spirited man, the high class American citizen, the supporter of every worthy cause, the loyal friend and helper of the needy, a man who honored his profession and brought to all a full assurance of hopeful service, and be it further

Resolved, That these resolutions be spread on the minutes of this society, a copy sent to Mrs. Clint and son, and that they be published in the *Journal of the Missouri State Medical Association*.

G. S. DOWELL, M.D.
H. H. PATTERSON, M.D.
TINSLEY BROWN, M.D.,
Committee on Resolutions.

HENRY L. REID, M.D.

The following resolutions were adopted by the Mississippi County Medical Society:

WHEREAS, Dr. H. L. Reid, a physician of Charleston, Mississippi County, Mo., and a prominent member of this society, while sitting at his desk in his office on the morning of February 5, 1925, suffered a cerebral hemorrhage and a few hours later passed into the Great Beyond, and

WHEREAS, He had for many years been actively engaged in the general practice of medicine in this county as a member of this society; had been a regular attendant at its meetings and, by his interest and counsel, had striven ceaselessly to make its sessions interesting and helpful, encouraging and supporting every means by which its membership might

be enabled to render a more efficient service to the public, therefore be it

Resolved, That we as individuals have lost a true and faithful friend and confrere, our society one of its most loyal members, and the public whom he so faithfully served a beloved physician and citizen, be it further

Resolved, That we extend our heartfelt sympathy to the bereaved wife and other relatives; and the secretary be instructed to send copies of this resolution to Mrs. Reid, to the local press and to the *Missouri State Medical Journal* for publication, and a copy spread upon our minutes.

S. P. MARTIN, *President*,
W. S. LOVE, *Secretary*,
Mississippi Co. Medical Society.

LEE O. MASON, M.D.

Dr. Lee O. Mason, of Bevier, a graduate of Birmingham Medical College, Birmingham, Alabama, 1904, died February 23, 1925, from a heart affection and chronic nephritis. He was 47 years old.

The doctor collapsed while treating a patient in his office on February 19, and while his condition improved for a few days he suffered another attack from which he died almost instantly.

For over fifteen years he had been a member of Macon County Medical Society and the loss of his wise counsel and loyal support will be greatly felt by that body. He was at one time coroner for Macon County.

Funeral services were conducted by Emmanuel Commandery Knights Templar of Macon.

PAUL C. SCHOLZ, M.D.

Dr. Paul C. Scholz, of St. Louis, a graduate of Barnes Medical College, 1902, was instantly killed when struck by an automobile March 6, 1925. He was 64 years old.

Dr. Scholz had been practicing medicine in St. Louis for the past twenty years and was an active member of St. Louis Medical Society.

W. BENTON KLEISSLE, M.D.

Dr. W. Benton Kleissle, of St. Louis, a graduate of the St. Louis College of Physicians and Surgeons, 1914, died January 23, 1925, aged 42 years. Dr. Kleissle was a member of St. Louis Medical Society.

BOOKS FOR LEISURE MOMENTS

Philip Gibbs, the great stylist, whose writings won him a knighthood, has again beguiled us from the commonplace with his "Reckless Lady," or ladies (Geo. H. Doran, New York), for the mother is as equally fascinating as the charming daughter he so lovably portrays.

Gibbs has left the horrors of Europe after the war, which is only referred to casually in this volume, to transport us from the enchantment of a villa at Monte Carlo, where life is colorful, vivid, languorous, through the pleasures of a season in London; and, as a harsh contrast to these, to a honeymoon in Grand Rapids, Michigan.

It would seem to me that the hundred per cent. Americans would not burst with pride when reading the perfect picture of life as portrayed by the impartial Mr. Gibbs in the home of furniture, where the conversation at the dinner table of the elite ranged from "the progress of culture in Grand Rapids to the decadence of the younger generation"; where Sylvia "learned that prohibition is a farce—that they think Europe is beyond all hope; that there's one motor car to every nine people including babies and imbeciles; that Grand Rapids is next to Main Street; and in New York where everyone is rush—for what? So that he may gulp a sandwich and coffee in order to waste an hour."

The reckless, daring Sylvia shows her adaptability in leaving the scenes of her childhood, France and Italy, to go with her mother and brother to drab old London, because her father, who has been in India most of her life, has returned to England and wishes to share his children's lives. His love for his wife, who has betrayed him years back, still persists in spite of everything. He persuades her to move to England. Sylvia loves London almost as much as Paris. Her mother, the other reckless lady, becomes involved in a money making scheme which fails and finally ruins her husband.

Sylvia, at this juncture, is dismayed to find herself in love with an American. She is very loath to leave her beloved land, but at the death of Colonel Fleming, breaks all ties to go to an unknown land where she knows she will be foreign in every instinct and desire of her nature. She tries here to adapt herself to her environment but breaks out now and then with such a remark as "I want to be unfair; I want to say 'to hell with Abraham Lincoln!'" or something frightful like that in Mrs. Sturges' drawing room.

She does shock all the best people of Grand Rapids, to her considerate husband's great distress, and the climax comes when a young French violinist falls desperately in love with her and commits suicide when she repels his advances. She is finally subdued and thoroughly Americanized (which we can but secretly regret) by the advent of a son who must be brought up a good American. E. S. T.

Eight lectures comprising a course in medical history delivered by the author are here presented in Seelig's "Medicine, An Historical Outline" (Williams and Wilkins, Baltimore) in book form and each of the eight chapters presents in more or less chronological order the happenings during an historical period. Dr. Seelig's characteristic style with his peculiarly evident literary resourcefulness has made this little work singularly attractive.

The pages actually teem with information and much is told in comparatively few words. Most of the minor and unimportant historical matter is, of necessity, omitted. However, there are many interesting statements which might have been overlooked by some well informed student of medical history. A foreword by Fielding H. Garrison follows the title page.

No other small work on medical history contains as much valuable information as is crowded into these two hundred pages. It will be found interesting by the physician who is well informed on the subject and it certainly will be instructive to the medical student and young practitioner whom it may inspire to further studies in the history of medicine, without which knowledge no one can be considered a well trained physician or surgeon.

A few typographical errors are of minor importance but there is opportunity for considerable improvement in the index. On page 156 it might have been more polite, as well as more accurate to mention the name of Walter Reed before those of any of his associates in his great work in yellow fever. The forty-eight illustrative plates are carefully selected and well executed. They are alone worth the price of the book. R. E. S.

MISCELLANY

AUGUST VON WASSERMANN

The death of Professor August von Wassermann on March 16, 1925, has deprived the medical world of one of its ablest investigators and the human race of a benefactor. Through his continued studies he

has made several lasting contributions to the body of knowledge basic to general race betterment.

Wassermann was born February 21, 1866, at Bamberg, Bavaria. His father was a royal banker who gave his son the opportunity to gain a sound general and professional education. Wassermann studied medicine at the universities of Erlangen, Munich, Vienna, and Strassburg, receiving his degree from the last named institution in 1888. He then became assistant for infectious disease at the Koch Institute of the Charité at Berlin, gaining the title of professor in 1898. In 1901 Wassermann was given an appointment to the University of Berlin as Professor Extra-Ordinary (Privatdozent), a position carrying with it no emoluments outside of the opportunity to teach and experiment in the university medical school and its laboratories. Within a year his unselfish devotion and keen interest in the science of medicine brought him a full professorship. In 1906 he assumed the duties as head of the Division for Experimental Therapy and Serum Research at the Royal Institute for Infectious Diseases at Berlin. In 1913 he added to his duties those of director of the newly founded Kaiser Wilhelm Institute at Dahlem, near Berlin, an institute for experimental therapeutics.

As a mark of appreciation of beneficial public service the title of Secret Councillor (Geheimrat) was conferred upon Wassermann in 1907; he was also awarded the Japanese Order of the Holy Treasury, the Turkish Order of Ozman, the Spanish Order of Elizabeth the Catholic, and the Reichs Adler Order.

Professor Wassermann was a prolific contributor to medical literature. As an introduction to Ebstein and Schwalbe's Handbook of Practical Medicine he has written an able discussion concerning general studies on infectious diseases, especially influenza. He was also a regular contributor to the Eulenburg Encyclopedia, writing on immunity and serum therapy. He published many articles on newer subjects, such as hemolysin and precipitin. His best known works are contained in the Handbook of Pathological Microorganisms, which he published in collaboration with Kolle.

Wassermann made a far-reaching and important contribution to forensic medicine by "his precipitin reaction which distinguishes the blood of men and animals by differentiating albumin bodies contained therein."

His greatest discovery, the complement fixation test in syphilis, was announced in 1906. This, the so-called "Wassermann Test," is an application to syphilis of a general reaction discovered by Bordet and Gengou.

An appreciation of the vast importance of the use of the Wassermann test as an aid in the diagnosis and treatment of syphilis may be gleaned from data collected and compiled by the Division of Venereal Diseases of the United States Public Health Service. The 165 laboratories of State Health Departments and State Institutions, scattered throughout every state in the Union and included in this investigation, administered 990,130 Wassermann tests in 1923. This figure, when reduced to more evident terms, means that these 165 state laboratories have given one Wassermann test per every 106 people in the United States. The importance of the Wassermann test is further enhanced by the fact that these figures do not include many Wassermann tests made by private laboratories.

Though Wassermann's name has been connected with important researches dealing with the problems of cancer and tuberculosis, he has enshrined his

name in medical annals by virtue of his work in the diagnosis and treatment of syphilis. Wassermann, a distinguished pupil^o of Koch and Ehrlich, has earned the name of a great benefactor of humanity. —United States Public Health Service.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, FOR 1925

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID THE STATE ASSESSMENT FOR ALL
THEIR MEMBERS)

- Benton County Medical Society, October 10, 1924.
- Chariton County Medical Society, December 20, 1924.
- Camden County Medical Society, December 29, 1924.
- Madison County Medical Society, January 21, 1925.
- Montgomery County Medical Society, January 22, 1925.
- Clark County Medical Society, January 30, 1925.
- Cape Girardeau County Medical Society, February 10, 1925.
- Dent County Medical Society, February 19, 1925.
- Webster County Medical Society, February 26, 1925.
- Ste. Genevieve County Medical Society, March 24, 1925.
- Ralls County Medical Society, April 2, 1925.
- Caldwell County Medical Society, April 4, 1925.
- Taney County Medical Society, April 6, 1925.
- Christian County Medical Society, April 15, 1925.
- Monroe County Medical Society, April 20, 1925.
- Cooper County Medical Society, April 28, 1925.

BATES COUNTY MEDICAL SOCIETY

The Bates County Medical Society held its regular monthly meeting at the courthouse in Butler, Thursday, April 30, at 1:30 p. m.

After current business was disposed of, Dr. Herbert A. Rhoades, President, introduced Dr. Sam Snyder, of Kansas City, who presented a group of general medical cases, and followed this clinic with the presentation and discussion of a number of radiographs of the chest. Dr. Snyder's program was enjoyed immensely.

Dr. Paul Stookey, of Kansas City, was then introduced and presented a case of geographical tongue, after which he discussed some of the problems of syphilis. We were very glad to have Dr. Stookey with us, but sorry that we could not furnish a more complete clinic for him.

Dr. Clinton K. Smith, Kansas City, then presented a paper on the "Diagnosis of Common Urological Conditions." Dr. Smith supplemented his paper with charts and radiographs. He particularly stressed the importance of the diagnosis of ureteral stricture. His presentation of the subject was such that it was very valuable to the general practitioner.

After the completion of Dr. Smith's paper a vote of thanks was extended to Drs. Snyder, Stookey and Smith and the meeting adjourned.

GEO. H. THIELE, M.D., Secretary.

CALDWELL COUNTY MEDICAL SOCIETY

The Caldwell County Medical Society met in Hamilton, April 30, at 2 o'clock in the Public Library Building. Present, Drs. G. S. Dowell, President; Tinsley Brown, Secretary; H. H. Patterson, C. H. Wilber, W. S. Shouse and L. M. Daley. Dr. Hugh D. Hamilton, of Kansas City, was present on invitation was accorded the privilege of the Society. The minutes of the meeting held in Kingston March 26 were read and approved.

The announcement of the sudden death of Dr. Morgan Leland Clint, of Breckenridge, on the 23rd of March was made by the secretary. Resolutions of respect for our respected and honored member were presented and on motion adopted and ordered spread on the regular minutes of the Society, a copy sent to the wife and son of the deceased and to be published in the *Journal of the Missouri Medical Association*.

The granting of a transfer to Dr. J. W. W. Cannon to the Medical Society of Pocatello, Idaho, by the Secretary, was approved.

The work of the Society was then taken up which consisted mostly of clinical cases conducted by Dr. Hamilton and others. One case of epithelioma of ear, one of vaginal cystocele, one of supposed gall-bladder infection and a fine case of mitral stenosis with some stomach disturbance as a prominent symptom, were discussed. The time of the meeting was well taken up and all present considered that the meeting had been a good one.

A vote of thanks was given to Dr. Hamilton for his participation and presence. The Society adjourned to meet in Breckenridge the third Thursday in May.

TINSLEY BROWN, M.D., Secretary.

A report of the Caldwell County Medical Society from April 30, 1924, to April 30, 1925. Meetings, seven, with an average attendance of eight and one-third. But few papers have been read and the meetings have mostly been taken up with clinical work aided by several visitors from outside the county.

At the beginning of the year there were nineteen physicians in the county and since then one has moved in who has since been made a member. Three have been reinstated as members. Two have died and one was given a transfer. Dr. R. L. Mount died June 11, in the Christian Church Hospital, Kansas City. He had been an active member of the society and resided at Polo. Dr. M. L. Clint, one of our active members, died at his home in Breckenridge on April 23, last. There now remain eighteen physicians in the county and seventeen are members and dues paid for the year 1925. Our society is certainly alive and in good working order.

TINSLEY BROWN, M.D., Secretary.

CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society held its regular meeting in Liberty, at the Major Hotel, Thursday evening, April 30. Thirty-four members and wives were seated at the banquet table promptly at 6:30, to partake of a splendid dinner. The floral decorations were appropriate to the season and the service perfect.

After dinner the Ladies' Auxiliary assembled in the spacious parlors of the hotel while the scientific session proceeded in the large dining room of the Major.

After the usual preliminaries, Dr. R. D. Irland, of Kansas City, opened the "Symposium on Appendicitis" in a "paper full of brass tacks." The high

points: Diagnostic essentials; operative indications; value of the leukocyte count; when to operate; concomitant pathology; report of cases—in short, all of the essential points, exclusive of most well known technique. It was one of our most comprehensive papers, without useless camouflage.

The discussion, participated in by every one present, brought out many interesting and important facts from experience with the enemy. The majority of opinion was for immediate operation as soon as diagnosis was positive, while the ideal time to operate would seem to be when nature was beginning to rally against the shock with the natural effort at repair.

A vote of thanks was unanimously approved by the members present to Dr. Irland, for his able discussion of this important subject.

Our June meeting will be at the Odd Fellows Home in Liberty, beginning with basket dinner on the grounds, and followed by clinics of most interesting character. Can't afford to miss these meetings.

J. J. GAINES, M.D., Secretary.

DAVISS COUNTY MEDICAL SOCIETY

At a regular meeting of the Daviess County Medical Society held at the Gallatin Y. M. C. A., April 28, 1925, the following officers were elected: Dr. J. D. Dunham, president; Dr. A. G. Minnick, vice-president; Dr. M. A. Smith, secretary and treasurer; Dr. L. R. Doolin, delegate to the state meeting and N. M. Wetzel, alternate and reporter. Those present were: Drs. J. E. Moore, of Trenton; J. D. Dunham, F. Hedges and Anna McClung, of Pattonsburg; A. G. Minnick, of Lock Springs; N. M. Wetzel, of Jameson; and Hanna, Gardner, Doolin and Smith, of Gallatin.

Following the election of officers, Dr. Moore presented a very able paper on appendicitis, fully covering the subject in every detail, including diagnosis, diet and treatment. This paper was well received and quite generously discussed.

Dr. Wetzel presented the subject of "Diabetes, Insulin and Medical Research." All present took an active part in the discussion of new treatment with insulin for the dreaded and fatal disease of diabetes.

The medical profession is striving earnestly to get a specific cure for diabetes, tuberculosis, cancer and other fatal diseases.

The Daviess County Medical Society promises to take on new life and every member is urged to be present at every regular meeting and to contribute some subject of interest, or a special clinic. Surely it is timely that the citizens of Daviess County recognize the importance of their family physician attending the county and state medical meetings; for example, they would not think of employing a teacher in the public school who was not affiliated with progressive teachers' institutes and normal work. Unfortunately, we have men in the state whose morals are such that they are not eligible for membership in the County or State Society.

Dr. Dunham, our representative, gave a very able explanation of the medical proceedings at the state legislature during its recent session.

The next regular meeting will be some time in July, the exact date to be announced later.

N. M. WETZEL, M.D., Reporter.

GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY

The Gasconade-Maries-Osage County Medical So-

ciety met at Belle, April 9, 1925, and was called to order by the president, Dr. M. E. Spurgeon, at 2:20 p. m. The secretary being absent, Dr. W. R. Ferrell was appointed acting secretary. Those present were Drs. M. E. Spurgeon, Julius Lingenfetter, J. L. A. Buechler, P. J. McGann, W. E. Johnson, J. B. Underwood and W. R. Ferrell.

Dr. Ligenfelder read a paper entitled "Current History Medical Aspect."

The election of officers resulted as follows: President, M. E. Spurgeon, Red Bud; secretary, W. R. Ferrell, Belle; censor, W. E. Johnson, Belle; delegate, M. E. Spurgeon, Red Bud.

Dr. John Baehr was elected a member on application by transfer from Franklin County Medical Society.

The meeting adjourned to meet at Linn, June 18, 1925.

M. E. SPURGEON, President,
W. R. FERRELL, Secretary.

NEW MADRID COUNTY MEDICAL SOCIETY

The New Madrid County Medical Society held its meeting in the city of Lilbourn, Thursday at 8:00 p. m., April 9. The following doctors were present: From Gideon, Drs. Cochran and Fulker-son; Parma, Dr. Blackman; Portageville, Drs. Mayfield and Killion; Morehouse, Drs. Elders and Dunaway; Marston, Dr. McRaven; Lilbourn, Drs. Jones, Adams and Wiley, and from New Madrid, Drs. Fakes and O'Bannon.

The following papers were read and very generally discussed: Dr. McRaven gave a very interesting report on "Ileocolitis." Dr. Wiley on "Infant Feeding," Dr. Blackman, "Complications of Pregnancy." All of these papers were very good and were certainly thoroughly discussed.

A motion was adopted that the New Madrid County Medical Society hold a joint meeting with the Ladies' Auxiliary, which will be held at New Madrid during the first week in May.

Dr. Elders was elected delegate and Dr. Fake alternate to attend the state meeting at Kansas City.

After the meeting a delicious luncheon was served by the wives of the Lilbourn doctors.

WM. N. O'BANNON, M.D., Secretary.

NODAWAY COUNTY MEDICAL SOCIETY

The Nodaway County Medical Society met in the rooms of the Nodaway County Health Department Friday, April 30, at 8 p. m. Members present were, Drs. Person, president, Wallis, Bell, Dean, and Humbert. Dr. Dean was elected secretary pro tem in the absence of Dr. Fryer. The minutes of the last meeting were read and approved.

No formal program having been planned or prepared for the evening, topics of general interest were discussed. The present policy of Hygeia, published by the American Medical Association, was heartily endorsed.

The question of collecting the annual dues received attention; nearly all dues to date having been paid in, an effort will be made to place the county on the state Journal's "Honor Roll."

The president was instructed to secure a speaker from Omaha to address the society at the June meeting on some subject in connection with obstetrics. The results obtained by immunizing school children with diphtheria toxin-antitoxin were given, and closer cooperation with the county health department urged.

Dr. Bell was elected alternate delegate to the

Kansas City meeting of the State Medical Association next week.

C. D. HUMBERD, M.D.

PETTIS COUNTY MEDICAL SOCIETY

The Pettis County Medical Society met in regular session, Monday evening, May 4, at Hildebrandt's Cafe, Sedalia. The meeting was called to order by the president, Dr. D. E. Shy. The following members were present: Drs. D. E. Shy, M. P. Shy, Walters, Boger, Bohling, Monroe, McNeil, Love, Trader, Bishop, Yancey, Bradford, Barnum, Mitchell, Hite, Walker, Jones and Carlisle.

An excellent dinner was served after which President Shy introduced Dr. H. W. Harper, of Dr. Willard Bartlett's Clinic, St. Louis. Dr. Harper gave a very interesting and instructive talk on "The Diagnosis and Treatment of Goiters." The society voted thanks to Dr. Harper for coming down and making such an interesting talk.

Some routine business was transacted after which the meeting was adjourned.

JNO. B. CARLISLE, M.D., Secretary.

SCOTT COUNTY MEDICAL SOCIETY

The Scott County Medical Society has been holding some very interesting meetings and the secretary, Dr. Sylvester Doggett, has sent reports to THE JOURNAL but unfortunately these reports were miscarried in the mail. Dr. Doggett has sent a resume of the meetings of December and February which we are glad to present.

Early in December a regular meeting of the society was held at Fornfelt in the office of Dr. G. S. Cannon. At this meeting the annual election of officers was held and the following elected: President, Dr. T. R. Frazer, Commerce; vice-president, Dr. H. V. Ashley, Illmo; secretary-treasurer, Dr. Sylvester Doggett, Morley; censor for three years, Dr. L. O. Rodes, Sikeston; delegate to the state association, Dr. G. S. Cannon, Fornfelt. The attendance at the meeting was not large but the spirit of fellowship displayed was most encouraging and those who failed to attend the meeting missed a real treat.

After the meeting the members were entertained at the home of Dr. Cannon, where a real feast was provided for their enjoyment and all unanimously agreed that Dr. and Mrs. Cannon were real and royal entertainers.

It was voted that the next meeting would be held at Oran in the office of Dr. W. H. Wescoat on February 10.

Meeting of February 10

The evening of this meeting was stormy, with rain and wind, making it difficult for the members to attend. There was a good number present, however, and enthusiasm evident.

Resolutions were adopted endorsing the amendments to the medical practice act sponsored by the State Medical Association and copies were ordered sent to our representative and senator asking their support of the bill.

Another resolution was adopted approving the legitimate use of alcohol but disapproving of the promiscuous prescribing of whiskey said to be practiced by some members of the profession.

After an enjoyable evening, the society adjourned to meet in the courthouse at Benton the latter part of April.

Meeting of May 21

This meeting was held in the Court House at Benton, having been postponed from the first of the month until this time on account of the State Association and Southeast Missouri Medical Association meetings coming in such close range. The meeting was called to order by the president, Dr. T. R. Frazer. A reasonable crowd was present and a lively meeting was the result.

Some case reports of great interest were made and several interesting discussions ensued.

After an interesting and beneficial evening the meeting adjourned to meet at Oran on June 23, at 2:00 p. m., a call meeting to which every doctor in the community is invited. At this meeting the district councilor will discuss the plans of our president of the State Association for the coming year; our delegate to the State Meeting will report to us and we will discuss our county fee bill and any other business that may come before the society at that time. We hope for and confidently expect a rousing meeting.

SYLVESTER DOGGETT, M.D., Secretary.

SOUTHEAST MISSOURI MEDICAL ASSOCIATION

The Southeast Missouri Medical Association held its forty-ninth annual meeting at Malden, May 12 and 13, 1925. There was a large attendance of the physicians of Southeast Missouri and some from Southern Illinois. Nearly all the papers on the program were read and discussed. There seemed to be a very lively interest in the Association.

Dr. John D. VanCleve, of Malden, was elected president, and Dr. D. H. Hope, of Cape Girardeau, was elected vice-president. All other officers of the Association were reelected. Poplar Bluff was selected for the next place of meeting on the first Tuesday in October, 1925.

An amendment to the constitution was adopted reducing the number of meetings to one annually to be held on the first Tuesday in October.

The citizens of Malden entertained the Association in grand style with a banquet and a splendid musical program, interspersed with speeches bearing on the history of medicine and public hygiene.

The Malden meeting will be long remembered by those present. Many new members were added to the roll. The addition of new blood will quicken the activities of the Association in the future.

G. W. VINYARD, M.D.

ST. LOUIS COUNTY MEDICAL SOCIETY

The regular meeting of the St. Louis County Medical Society was held Wednesday afternoon, April 8, at 2:30 in the Directors' room of the Webster Groves Trust Co. The president, Dr. Otto Koch, was in the chair, and the following members were present: Drs. Koch, Armstrong, Corley, Fredericks, Sutter, Schudde, O'Malley, J. A. Townsend, Baker, Westrup and Dyer.

The application of Dr. Joseph D. Stoelzle of Clayton was read and referred to the membership committee for investigation and recommendation. Transfer card was granted to Dr. George J. Fuchs to the St. Louis Medical Society. Card of thanks from Mrs. C. A. Dunnivant, widow of the late Dr. C. A. Dunnivant, of Kirkwood, was read.

Because of the resignation of Dr. Wm. F. Mitchell as secretary and treasurer, he having moved to Gray's Summit, Mo., nominations were made and ballot spread, resulting in the election of Dr. Clyde P. Dyer, of Webster Groves.

The society was addressed by Dr. W. F. O'Malley, County Health Commissioner, upon the problems of sanitation and communicable diseases in St. Louis County. Because of the proximity of portions of St. Louis County to the City of St. Louis, sanitation problems have become very important and special sewer districts have been arranged and close co-operation with the city will prevent much sickness and disease.

There will be strict supervision of the Meremac River and the individuals, especially tradesmen who cater to the public at the river. A sanitary inspector from the health commissioner's office will be at work all summer.

Discussion by all the members present brought out many problems and their solutions and the meeting was of real benefit to all.

Several members expressed their intent to attend the State Meeting at Kansas City, May 5, 6, 7, and will be accompanied by their wives who are members of the Woman's Auxiliary.

CLYDE P. DYER, M. D. Secretary.

The regular meeting of the St. Louis County Medical Society was held in the directors' room of the Webster Groves Trust Co., on Wednesday, May 13. The meeting was called to order by the president, Dr. Otto W. Koch, at 3:00 p. m. and the minutes of the last meeting read and approved.

The application of Dr. Chester A. Poe, of Wellston, was received and upon motion of Dr. Armstrong, seconded by Dr. J. A. Townsend referred to the membership committee for investigation and report.

The membership committee reported favorably upon the application of Dr. Stoelzle, of Clayton, and the ballot being spread resulted in his election to membership in this society.

A letter from Dr. A. W. Westrup regretting that he would be unable to have the June meeting as planned because of illness in the family, was read. Dr. J. A. Armstrong who had extended an invitation to the society for the same meeting, again invited the members and their wives to meet at his home. He requested that the meeting be held Wednesday evening, June 3, at 8:00 o'clock, and that as little business as possible be transacted. It was moved by Dr. Dyer, seconded by Dr. Jones that the invitation and change of date be accepted. Carried.

The report of Dr. J. A. Armstrong, delegate to the state meeting, was deferred as we were honored by the presence of Dr. B. P. Wentker, of St. Charles, the Councilor of our district. He was invited to speak to us at this time and responded with an appeal to all members of the society to try and bring every medical man into our society and to bend every effort to educate the public in hygienic and medical matters. Then the isms and cults would not go forward but would be overcome and the medical man would hold the recognized place in science that is truly his.

Dr. Tainter, of St. Charles, was invited to speak and he stressed our lack of methods of handling the neurotic and functional disorders, which were the source of most of the income of the cults and quacks.

Discussion was entered into by Drs. J. A. Townsend, Hayward, Jones, Dyer, Armstrong and others.

The scientific program consisted of a "Review of Fifteen Cases of Goiter, not Exophthalmic," by Dr. J. A. Townsend. The medical treatment with iodine gave results which were very gratifying. All exophthalmic cases were referred to surgeon at

once. Dr. F. J. Tainter was invited to open the discussion, in which Drs. Armstrong, Wentker and Hayward all participated. Closing remarks by Dr. J. A. Townsend.

Moved by Dr. Dyer, seconded by Dr. Jones that a rising vote of thanks be given to Dr. J. A. Townsend and our visitors Drs. Wentker and Tainter.

Members present: Drs. Koch, Armstrong, J. A. Townsend, Knabb, Hanson, Barnett, Hayward, Jones, Dyer, Baker. Visitors: Drs. Wentker, of St. Charles, Councilor, and Dr. F. J. Tainter, of St. Charles.

CLYDE P. DYER, M.D., Secretary.

ST. LOUIS MEDICAL SOCIETY

March 31, 1925

The meeting was called to order at 8:35 p. m. by the president, Dr. Fred Bailey.

The minutes of the previous meeting were read and approved.

Dr. George Gellhorn introduced the speaker of the evening, Dr. Ernst Frederick Muller, University of Hamburg, who spoke on "The Action of Non-specific Protein Therapy by Way of the Involuntary Nervous System," with lantern slide demonstration.

Discussion by Drs. M. F. Engman, J. L. Marder, O. P. J. Falk, Geo. Gellhorn, C. D. Pickrell, John Green, Jr., A. P. Munsch, E. P. Buddy, Fred Bailey; Dr. Muller closing.

Dr. M. F. Engman introduced the following resolution, which on motion, seconded by Dr. George Gellhorn, was unanimously adopted:

WHEREAS, Dr. Max C. Starkloff has been the Health Commissioner of the city of St. Louis for the past thirty years, and

WHEREAS, His service has been equal in efficiency, perspective and untiring energy to that of any health officer in the country and

WHEREAS, He has the whole confidence and respect of the medical profession as well as the laity, therefore be it

Resolved, That the St. Louis Medical Society go on record as recommending to the next mayor of St. Louis Dr. Starkloff's reappointment as Health Commissioner.

Attendance 185.

April 7, 1925

The meeting was called to order at 8:30 p. m. by the president, Dr. Fred Bailey.

The minutes of the previous meeting were read and approved.

A letter from the U. S. Veterans Bureau was read inviting the members of the Medical Society to attend their clinical meetings.

The secretary read a communication from the president of the Woman's Auxiliary inviting and urging the wives of members of the society to attend the annual meeting of the State Association to be held in Kansas City, May 5, 6, and 7.

The scientific program consisted of the following: "Surgical Significance of Glycosuria," by Dr. M. G. Seelig.

"Medical Aspects of Glycosuria in General," by Dr. C. H. Neilson.

Discussion, Drs. Wm. H. Olmsted, O. P. J. Falk, F. Neuhoof, Martin Van Raalte; Dr. Seelig closing. Attendance 146.

April 14, 1925

The meeting was called to order at 8:30 p. m. by the president, Dr. Fred Bailey.

On motion the minutes of the previous meeting were dispensed with.

Dr. John Zahorsky presented a case of "Rat Bite Fever."

Dr. Evarts Graham presented the speaker of the evening, Dr. George F. Dick, of Chicago, who read a paper on "Scarlet Fever."

Discussion by Drs. Jean Cooke, W. McKim Marriott, John Zahorsky, Ralph A. Kinsella, John C. Falk; Dr. Dick closing.

Dr. Marriott moved that the by-laws be suspended and Dr. Dick be made an honorary member of the Society. Seconded and carried.

Attendance 410.

April 21, 1925

The meeting was called to order at 8:30 p. m. by the president, Dr. Fred Bailey.

The minutes of the meetings of April 7 and April 14 were read and approved.

Dr. Lee Pettit Gay presented the following resolution which on motion was adopted:

WHEREAS, The Board of Education at the meeting of April 14 has seen fit to create a department of Health Education for all grade schools and high schools in the city of St. Louis, and

WHEREAS, The Board has provided for a supervisor and assistant supervisor for the purpose of personal instruction of teachers and pupils in all schools in the matter of health education, and

WHEREAS, The creation of the department of Health Education is due to the genius and untiring labor of the Superintendent of Instruction, Mr. John J. Maddox, be it therefore

Resolved, That the St. Louis Medical Society, realizing the importance of teaching the principles of health and hygiene, heartily approves of this action of the Board of Education and earnestly commends the work of Mr. John J. Maddox and the members of the Board of Education.

On motion of Dr. A. H. Hamel, seconded by Dr. R. E. Schluter, the following resolution was adopted:

Resolved, That the delegates of the St. Louis Medical Society extend an invitation to the State Association to meet in St. Louis the coming year and request the action of the St. Louis Medical Society empowering the invitation.

The scientific program consisted of the following: "Interpretation of Rudimentary Organs, Lantern Slides," by Dr. A. G. Pohlman.

"The Autonomic Nervous System," by Dr. Hillel Unterberg.

Discussion by Dr. M. W. Hoge.

"Pernicious Anemia," with lantern slide demonstration, by Dr. G. O. Brown.

Discussion by Drs. Wm. D. Collier, A. G. Pohlman; Dr. Brown closing.

Attendance 196.

E. C. FUNSCH, M.D., Secretary.

TEXAS COUNTY MEDICAL SOCIETY

Texas County Medical Society met at Houston, April 9, and transacted the regular business of the society. The committee on revising the fee bills appointed at a previous meeting was not ready to report. The committee on publicity reported that they would begin work the following week and arrange for a public meeting of the society on August 13, the next regular meeting time. Special speakers will be invited to attend this meeting and give addresses to the public on some phase of preventive medicine.

There was a general discussion concerning the activities of the cults and many new sidelights were

brought out by the members who have had experience with persons treated.

Every member at the meeting was appointed a committee of one to try to get all the physicians in the county interested in society work. "Let us not hide our good works under a bushel," but boost and make our society worth while.

LESLIE RANDALL, M.D., Secretary.

VERNON COUNTY MEDICAL SOCIETY

The Vernon County Medical Society held its first meeting of 1925, Tuesday, March 12. The meeting place was in the Chapel of the State Hospital, No. 3, Nevada. Drs. Hootor, Johns, Holmes and Horn were in charge of the program.

The death of Doctor W. T. Bohannon, of Nevada, was reported and a committee on resolution was appointed. Dr. Bohannon had been a member of the Society for many years and was made an Honorary Member several years ago. He was 81 years old and one of Vernon County's noblemen.

Dr. A. C. Curl, of Schell City, was elected an Honorary Member. Doctor Curl has been a faithful member for many years and is not in active practice at this time due to his age.

The hospital committee reported that a petition signed by more than 100 freeholders, more than 50 of them living outside of the City of Nevada, had been presented to the County Court, March 2, asking that a special election be held in 90 days for the purpose of voting a tax of two-thirds of a mill on the assessed valuation of Vernon County for a period of twenty years, this tax to retire a bond issue of \$185,000 to build and maintain a County Hospital. The Court set March 16 for its final action.

The program in the hands of the medical staff of the State Hospital, proved to be interesting. A subject old but always new to the general practitioner, "Classification of Insanity," with clinical cases of each variety presented, was the last feature that made the meeting unusually instructive. Dr. Hootor, the essayist of the hour, has so reduced the number of varieties in his classification that it simplifies matters wonderfully for those that do not come in contact with mental diseases every day. The comments by Dr. Johns added much to the interest.

The ladies organized an Auxiliary to the Society, electing Mrs. J. M. Yater, president; Mrs. E. R. King, vice-president; Mrs. W. G. Freiday, secretary and treasurer; Mrs. T. B. M. Craig, chairman of the committee on education; Mrs. W. H. Calloway, chairman of the committee on legislation.

Those present were: Dr. Geo. A. Johns, Jefferson City; Dr. J. W. Dawson, Eldorado Springs; Dr. Claude Allen, Rich Hill; Drs. Davis and Liston, Walker; Dr. J. B. Stokes, Harwood; Dr. C. W. Musser, Metz; Drs. Hootor, Holmes and Horn, State Hospital No. 3, Nevada; Drs. Amerman, Dulin, Freiday, Heibner, McLemore, Willson, King, Yater, Smith and Hornback, of Nevada.

J. T. HORNBACK, M.D., Secretary.

The Vernon County Medical Society met at Nevada, Thursday, April 9. The morning hours were spent in the surgical wing of the State Hospital, where a number of cases were examined and treated. The afternoon session was held in the Circuit Court room at the Court House.

Dr. Howard Hill and Dr. Claude J. Hunt, of Kansas City, Drs. C. B. Davis, of Walker, A. G. Althem, of Sheldon, and Tom Todd, of Adrain, were out of town guests.

The matter of uniting Vernon and Cedar County Societies was discussed and in the very near future

such union will take place and will be known as Vernon-Cedar County Medical Society.

"The Treatment of the Morphine Habit" was well presented by Dr. Holmes of the State Hospital. A number of cases have been treated at the State Institution very satisfactorily, but there seems to be a tendency for the addict to get back on the drug sooner or later. The Doctor gave as one reason for this that the will power of these unfortunates is reduced materially.

"Ulcer of the Stomach" was discussed by Drs. Hill and Hunt. The cause of stomach ulcers is mostly by infection in some other part of the body. The location of such infection was assigned to the teeth, tonsils, appendix and gallbladder. Fifty per cent. of the cases have gallbladder disease or appendicitis in connection with the stomach ulcer. Treatment is both medical and surgical. It was recommended that medical treatment with rest in bed and proper diet be given a thorough trial, as many cases respond to it well. Gastric ulcer has a tendency to recur after being cured. The reason for this is that many times the original cause has not been removed.

This was a very profitable meeting and there was much discussion of the subjects presented.

The next meeting will be held in June at which time Dr. Bruton, of the State Hospital, has intimated that he might have a little surprise for the Society.

The Ladies' Auxiliary held a very interesting and enthusiastic meeting on the same date.

Those present: Drs. Hunt, Hill, Todd, Althem, Bruton, Amerman, Brown, Craig, Callaway, Combs, Davis, Dulin, Freiday, Holmes, Heibner, Hornback, King, Love, McLemore, Moss, Pierce, Willson and Yater.

J. T. HORNBACK, M. D., Secretary.

WRIGHT-DOUGLAS COUNTY MEDICAL SOCIETY

The Wright-Douglas County Medical Society met in Dr. Ryan's office at Norwood, Thursday, April 30, 1925, at 2:00 p. m. with the president, Dr. E. C. Wittwer, in the chair and the following members present: Dr. R. A. Ryan, of Norwood; Drs. R. M. Rogers and J. A. Fuson, of Mansfield; Drs. F. B. Daily, E. C. Wittwer, H. G. James, and A. C. Ames, of Mountain Grove, and Dr. J. R. Mott, of Hartville.

After reading the minutes Dr. Wittwer called Dr. Rogers, the vice-president, to the chair while he gave a scholarly address on medical economics, which was discussed quite fully by most of those present.

Several letters were read by the secretary and some offers of assistance with our future programs were considered.

There was to have been a paper on puerperal sepsis but it was not presented; however, there was a quite lengthy discussion of the subject by most of those present.

Several members being in haste to leave, the meeting adjourned at 3:40 to meet at Ava, Thursday, August 6, but after their departure, the rest of the members remained a half hour longer and listened to the reading of a paper on Hot Springs, Ark., prepared for our Society by Col. L. M. Maus, of the Medical Corps of the U. S. Army. All agreed that it contained much of interest which was unknown to them before.

An attempt was made to organize the Woman's Auxiliary, by asking each member to bring his wife, but only three members did so, and by an unfortunate misconnection one of these failed to meet the other two, but the two had a good visit and got better acquainted.

A. C. AMES, M. D., Secretary.

BOOK REVIEWS

A LABORATORY MANUAL OF PHYSIOLOGICAL CHEMISTRY. By Elbert W. Rockwood, M.D., Ph.D. Professor of Chemistry and Toxicology in the University of Iowa, and Paul Reed Rockwood, M.D., Fellow in Medicine, The Mayo Foundation. Fifth edition, revised and enlarged. Illustrated with four colored plates and forty-three text engravings. Philadelphia: F. A. Davis Company, Publishers. 1924. 413p.

The review of a book is a difficult matter due to the difference in viewpoints of the author and reviewer, and a thorough review is almost impossible until one has used the book as a text with a couple of classes. Bearing in mind these points, let us proceed to an examination of the new edition book by the two Rockwoods.

A cursory inspection shows that the book is well-written, remarkably free from errors, and well designed from a technical viewpoint. The type is large and clear. While the chapters deal with distinct topics, there is a fair degree of continuity. Nevertheless, if the teacher's idea of the proper order of consideration differs from the authors', the chapters are not so interwoven as to prevent taking up the course in the sequence desired.

Passing to a more minute examination, one gains the impression that the material is presented from the standpoint of a chemical biochemist rather than a medical biochemist. As a rule the experiments seem designed with the idea of persuading the student to use his previously acquired chemistry. Discussions preceding the directions for experimental procedure are good. The authors do not confuse the student by indulging in all of the past and present theories and then forget to draw definite conclusions.

The colored pH indicator chart is quite useful, but it is to be regretted that a colored chart of the absorption spectra of hemoglobin and its derivatives is not included. The handling of acid-base equilibrium is good but the theoretical physical chemistry (Chapter III) upon which it is based is not so well presented. The experiments dealing with the isoelectric points of ampholytes are good but a little long and cumbersome.

Some of the analytical methods given could be advantageously replaced by simpler and more accurate procedures. While the reviewer would not advocate the turning of this text into a handbook of analytical procedures, he feels that a few alternative methods might well have been included or, as a substitute for these, a more comprehensive list of references.

In spite of the few shortcomings enumerated, the reviewer feels that the book by the Rockwoods is to be recommended for its clear, lucid presentation of the subject matter of a course in elementary physiological chemistry.

E. A. D.

CLINICAL THERAPEUTICS. Volume 1. Therapeutic Agents and Procedures. Volume 2. Treatment of Symptoms and Diseases. By Alfred Martinet, M.D., Paris, France. Second edition translated by Louis De M. Sajous, M.D. 332 illustrations. Complete in two volumes. Philadelphia: F. A. Davis Company. 1925. Price, two volumes, \$16.00, net. These two volumes with Martinet's preceding work, *Diagnostics*, form a system of medicine of great value. While it is difficult for most of us to transliterate into our American customs the teachings of this text, yet the principles laid down will be of extreme value to us even if we maintain some of our American customs.

In particular your reviewer would call attention to

the very valuable introduction to the study of clinical therapeutics. The principles laid down are without doubt what every practitioner of medicine should have observed in his preparation for practice. Unfortunately many students have not learned these principles and suffer in their later practice because they have not obtained this perspective of their work. He has no patience with those who do not utilize modern therapeutics, as may be illustrated from this quotation:

"Others though some of them remarkable diagnosticians or pathologists look upon the therapist with a haughty disdain of the physician of old for the barbers who carried out their directions. They deem therapeutics an inferior grade of art to be left to the quacks, masseurs, cuppers and herbalists. One of my old chiefs took occasion to mention to me that 'the mediocrity of a faculty is proportionate to the number of theses on therapeutics presented before it.' There is also this rather crude aphorism, 'Therapeutics. Either a patient is suffering from croakitis and we are helpless, or he is suffering non-croakitis, in which case he gets well of his own accord.' Implicit training in pathology, too much autopsy work have thus distorted too many minds, sometimes bright—though narrow—ones the skeptical influence of which proved disastrous in the first half of the nineteenth century, completely imbued as it was with organicism."

The prescriptions presented in Volume II are rather complicated for American use. Probably for the most part we would have to go to the catalogues of the manufacturing pharmacists and select from the list the material most nearly approaching that which we desire. Martinet does not hesitate to use new and proprietary drugs, but he does not give up the use of the old traditional ones.

In general, the text would serve well as a reference work to a course in therapeutics. G. H. H.

NOUVEAU TRAITÉ DE MÉDECINE. Fascicule XIV. Appareil Digestif. (Intestin). Publie sous la direction de MM. G. H. Roger, F. Widal et P. J. Teissier. 1 volume de 580 pages avec 168 figures et 7 planches en couleurs. Relié 45 fr. Editeurs, Masson et Cie, 120 Boulevard Sainte Germaine, Paris, France.

In this volume there are chapters on the pathology of the bowel, the gastro-intestinal disorders of nurslings, intestinal works, ankylostomiasis, the study of the feces, and the pathology of the rectum and the terminal colon. There are two color plates showing proctoscopic views of the rectum. They are fairly well done but there are not enough of them to enable the general practitioner to identify the pictures seen by him. There are two good color plates showing stools of nurslings, but here again there are only two, where an increase in the number would be a great help. There are some color plates showing epitheliomata and tuberculous ulcerations of the bowel. The color work is very good and all but one of the pictures are clear. The reproductions of the X-ray work are not sufficiently sharp to be of great value.

The disadvantage of the book is that it has to give rather a general summary of conditions without giving sufficient details or illustrative case histories to make the generalizations definite. On the other hand, the excellence of the discussion, both from the literary standpoint and from the scientific, makes the book of considerable value to one who is seeking orientation as to the French viewpoint on medical subjects. G. H. H.

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies
Issued Monthly under direction of the Publication Committee

VOLUME XXII

JULY, 1925

NUMBER 7

E. J. GOODWIN, M. D., EDITOR
901 Missouri Building, St. Louis, Mo.

PUBLICATION { W. H. BREUER, M.D., Chairman
COMMITTEE { C. B. FRANCISCO, M.D.
M. A. BLISS, M.D.

ORIGINAL ARTICLES

MEDICAL EDUCATION, MEDICAL LEGISLATION AND MEDICAL DISTRIBUTION*

PRESIDENT'S ADDRESS

W. A. CLARK, M.D.

JEFFERSON CITY, MO.

It is a custom in most learned and scientific bodies to elect some individual to the highest position they have to offer and expect him, at the close of his term of office, not only to express his gratitude and appreciation for the honor bestowed upon his unworthy head, an honor which he must pledge himself by all that is holy in some way to requite, but also to state the position of his society as it affects or is affected by current events and conditions. To such a task I, as President of the Missouri State Medical Association, address myself; and I wish to state in the premises that I fully realize that coming from the president of the Association that my words bear a semi-official stamp and that they will be printed and read after the story of the Iliad and Odyssey shall have been forgotten—but probably not until then!

The times change and we change with them, is a trite saying, hoary with age. *Tempora Mutantur, et nos mutamur in illis* is the way the old Roman said it, and his words so well express the thought that school boys have memorized it for two thousand years and no one has improved upon the diction, but the times change so slowly and our change with them is so imperceptible that it is difficult for us to evaluate our own position in the general scheme of things, although we may be able to map the position of our predecessors with satisfactory accuracy.

The past year particularly has been a time of flux in many things in which we, as doctors, are interested, and especially so in questions

involving medical education, medical legislation and medical distribution. We have been told so often both from within and without the profession that something is radically wrong that some have come to really believe it and have evolved some beautifully fantastic schemes for relief.

If there is anything wrong, without question it is better for us who are within to know it and institute remedial measures rather than to remain supine and have them forced upon us from without. The chief point of attack as I have read it during the year, has been upon our idea of educating ourselves for the practice of our profession. Like Banquo's ghost, this subject continues to rise on all occasions.

Many observers whose opinions are usually worthy of consideration, seem to see in this an explanation of most of the problems that confront us. Much has been said in both the lay and professional press indicating that the authors believed that we had developed erroneous ideas as to what a physician should know and that it would be better if we would get back to the days of the old family doctor. It is one of the peculiar characteristics of human nature that we look back upon past times and see only the joys and virtues, and not the vice and discomfort. For instance, much has been said of the good times in Merrie England, referring to that country in the 16th and 17th centuries, when most of us know that at that time, in reality, vice was universal, that disease was rampant, that misery, poverty and discomfort were the common heritages of mankind, that even the king and court went without comforts, the absence of which the laborers and artisans of our own times would not tolerate. It is said that we are educating our young men to be scientific diagnosticians and specialists and failing to enable them to get themselves *en rapport* with the people whom they must treat, and thus sending their patients, or people who should be their patients, to the ever increasing horde of limited practice cults. In this charge there is a half truth, and it could hardly be otherwise when we consider that

*Read before the 68th Annual Meeting, Missouri State Medical Association, Kansas City, May 5, 6, 7, 1925.

practically all the instruction in medical colleges is given by specialists.

On the other hand, we know that with the tremendous advance of medical science in the last half century it is impossible for any mind to become proficient in all its branches, for medical education has been extensively enlarged and improved, so that medical graduates now obtain a training in accordance with the greatly enlarged present day knowledge of medicine. It has come about that an over supply of medical schools, a large portion of which were of a low type, has been replaced by a much smaller number of better equipped institutions. It is also true that the whole number of medical students have been reduced more than half, while the better equipped colleges have gone up from four per cent. to eighty-eight per cent. In 1924 there were 3596 graduates, ninety-four per cent. of whom came from well equipped schools. There is no doubt, so far as educational requirements and scientific knowledge are concerned that graduates in medicine in recent years are immeasurably superior to those who formerly entered the profession. It might well occur to the lay brother who is ever prone to be humorous at the expense of his doctor, to caution us older fellows against such a public admission for fear the public will rush to the young men to get the benefit of their superior training and leaves us high and dry; and that might give us pause were it not for the fact that the trend is all toward falling away from scientific medicine and almost a scramble to the shorter cuts to health and cure as are exemplified by the various limited practice cults. We may close our eyes to this fact or even since we have not personally felt the deprivation in our own practice, deny it, nevertheless it is clearly capable of proof.

I take it that this is a condition that interests not only physicians but the general public as well. It interests physicians as it affects their ability to live and support their families; and the public as it affects the general health and well being, as it enables them to avoid or recover from disease and accidents and increase the span of normal life. If something better and quicker can be found than scientific medicine, the fact that those in this work should perish from the earth would not be of serious import to the body politic as their number is comparatively small.

We have been made appellants in the cause now trying and the burden of proof rests on us. That the case has come to trial is not entirely the fault of the twentieth century physician, but of the burden the good old family physician must carry his share. It has not

been so long since he arrogated to himself an almost omnipotent knowledge; he freely confessed that there was nothing he did not know concerning bodily disease and its cure, and, as we slangily say, "he put it over," although actually his knowledge of disease and its cure was in the majority of instances exceedingly meager, not measuring up in any manner to the real knowledge of his age. He did it by practicing, unknowingly perhaps, the very things that our cultist friends are doing today. The people judged him not by his real knowledge but by his pretense; because he answered calls promptly and took his own comfort and convenience into account not at all, because he sympathized with their ills, either real or imaginary, and never failed to give them something to take, because he did not delegate his functions to a trained nurse, because he stayed with his dying patients, closed their eyes when dead and often looked after the burial preparations. I would not dim one ray of the aureola about the brow of the old family physician. He encountered more hopeless misery and unutterable woe than all the other trades and professions combined. You found him everywhere; now among his star patients who really paid him what they owed; now doing a thankless job of surgery in some public hospital, or bending over some lone woman dying in a garret; and through it all his urbanity was never lost and his patience like the celestial virtue endured forever. Yet he was no saint, oftener than otherwise he professed no creed, but when he entered the sick room you could almost hear the sad sweet words grown mellow in the echoes of two thousand years—"In the world ye shall have tribulations, but be of good cheer, I have overcome the world."

For these things the people excused his faults and forgot his mistaken diagnoses and prognoses. But with more general education and increased enlightenment these virtues failed to satisfy and in our own time came the scientific study of medicine and surgery, improved methods of diagnosis and instruments of precision, and it became the fashion to get to the bottom of every condition in a reasonable manner, or to confess our inability to do so. Then the pendulum swung back, and as it always does in reform, it swung too far. Cold, logical, scientific knowledge was deified, and proclaimed the *magnum bonum* of those who would practice the healing art, forgetting that those on whom it was to be used were human beings with more or less intelligence and guaranteed by the Constitution the inalienable right of pursuing life, liberty and happiness in their own way.

I am not discouraged when I see in medical and lay press a cry to get back to the old family physician, for I see in it only a start back to normal and reasonable conditions. I think I know that they do not want what they think they do, but in reality, they want the modern, scientific physician who, along with his up-to-date equipment, has the qualities of mind and heart that were the *sine qua non* of the practitioners of the preceding generation and which are still the main stock in trade of those in most communities outside our centers of culture.

Doubtless unforeseen difficulties have arisen in the development of the medical curriculum but that does not necessitate either its abolition or the adoption of retrogressive changes. It is my belief that there is nothing fundamentally wrong but, that in the education of our young physicians of today some things that are at the basis of success and from which our profession really sprang have been permitted to fall into innocuous desuetude and that the condition may be easily remedied.

Our teachers and our young men are not the only ones who have sinned, but many of us have exercised our prerogatives of chasing after fads and have forsaken the religion of our youth. We have improved our technic and science but neglected our psychology. We have been scientific with those who are really ill and "have bound them to our soul with hooks of steel"; we have tried to be honest with those who were hopelessly ill or affected with imaginary complaints and sent them to the osteopath, the chiropractor or the faith curist. It may be better to be right than be president, but why not be both?

I have already admitted that most of the men coming from college are wonderfully well versed in certain things, but I am equally sure that this training is very largely in rare and chronic conditions; a knowledge of diseases found almost exclusively in hospital wards and problems that would be interesting to a specialist, and that they know very little about the beginning symptoms of less dangerous and less obvious conditions. In other words, I suggest that our young physicians be so trained that in comparison with their knowledge of trypanamide in neurosyphilis they know more about how a child's eyes and nose look the first two days of measles; that in comparison with their knowledge of the readings of the cardiograph they be better qualified to tell from a baby's cry whether it is hungry or has the colic. We may do this by grafting something of the apprenticeship system that prevailed up to within the last half century upon the modern intern system. We can insist that

our colleges and teaching hospitals be situated in densely populated districts and that the out-patient department be reorganized and that our senior students spend much of their time there.

The step from this service to ordinary family and bedside work will be much shorter and easier than from the hospital ward.

I believe that through the remembrance of your own experience and your observation of the experiences of younger men with whom you have come in contact, you will agree that something of this kind might help establish that confidence for the profession which we believe we deserve and on which we must rely in times of stress. I do not wish to be classed as a carping critic of conditions. "Traditional criticism," says Lee, "can always find sympathetic ears. It long ago became the custom to deride the physician. Montaigne and Moliere inherited it and so have critics of today. Let the physician beware, lest in criticising himself and his kind he forget that the chief enemy he has to fight is ignorance."

It is stated that the medical students in our own country have more clinical experience at the bedside than that furnished in any other country, but it seems to me to be a somewhat unnaturally distributed experience, an experience that he will not be able to use in the first years of his practice and that thereby he is handicapped and public confidence is likely to be lost. Mild, acute disease or the earlier stages of chronic disease are rarely seen in hospital wards. For instance, incipient tuberculosis is not often found in the wards, but of course is quite common in out-patient departments and exceedingly common in general practice. It seems that the mutations of time and change that have taken us away from the apprentice system and the physician mentor have left us without some things that are well worth while. I do not think that we are trained too scientifically but too unscientifically.

This idea of medical training has been made the scapegoat to account for about all the ills with which we are afflicted. Mr. Palmer, of chiropractic fame, has publicly stated that anybody who takes longer than two years in medical training is only an educated fool. It is charged, not by us of the cross-roads, but from the seats of the mighty, that our scientific training is responsible for the unequal distribution of physicians, a condition that we all must admit to be present. The argument is *post hoc* rather than *propter hoc*, for there is little proof that those who have spent little on their education are any more likely to demand less as an immediate return than those who have spent more. In fact, the recent dis-

closures of our Board of Health investigations have seemed to prove that those who trod the easy road to a medical diploma showed no desire to carry their warfare into the under-physicianed rural districts but on the contrary found the best field for their devious practices in the large cities.

That this condition is somewhat acute many of us who live outside the large cities can testify. That the mortality rates in these communities are not appreciably larger than in those where there are a greater number of physicians does not signify, for the social value of a physician is in alleviating suffering rather than preventing death. I dare say that many of you who go into the rural districts can call up pictures of continued and often useless suffering, although it did not cause death, which are appalling. The morbidity tables for these districts are of more value than the mortality, since we know that the tendency of the body in young and adult life is toward recovery.

The unequal distribution of physicians will never be much modified by the physician's training or lack of training, but by the unalterable law of supply and demand, by rendering the social and economic conditions in rural communities such that they will compare favorably with those in other communities. It has been suggested that a small salary paid by these districts for a few years in addition to their ordinary fees might cause young men to locate where they are really needed, with the hope that having once located and formed social and sentimental connections they would be likely to remain. Whenever such districts come to realize that the services of well trained physicians are worth what they cost, then the condition will remedy itself and not till then.

If these conclusions be correct, then the problem is, just what propaganda is best necessary to bring about results. That the general public, whatever may be their other attainments, are densely ignorant about problems affecting their own bodily ills is peculiar but true, and this ignorance is almost as dense in those who have had their day in college, wear good clothes and ride in limousines as in those who with their dinner pail walk to work and earn their daily wage by the sweat of their brow, but the former have a little better manner of covering it up. On the other hand, we who have gotten away from the idea of miraculous healings, divine interpositions, mad stones, witch's broth, love powders and laying on of hands, have been sarcastic scoffers rather than patient teachers and leaders.

To look askance upon a physician who uses some form of mental healing for certain forms

of disease or to class as morons some of those who have been so benefited is to be almost as unreasonable as those who would use it for everything on earth from an ingrowing toenail to the regulation of the household clock. We should remember that amid the Aesculapian cult there was elaborated the most beautiful system of faith healing that the world has ever known and that in all ages and all lands some form of it has survived, and that from it scientific medicine took its rise. Every physician who is eminently successful uses it in its proper place, either consciously or unconsciously, and we would do better if we labored to define its proper place than by a universal condemnation. Galen expressed a great truth when he said "He cures most successfully in whom the people have the greatest confidence." Given a physician with the same personality and he will do the same things as our Lady of Lourdes or St. Anne de Beaupre and a host of more modern miracle workers, for we know they were not miracle workers at all. He should do it a great deal better for he would be able to discriminate as to those he might reasonably expect to heal and those he could not and not waste valuable time or raise false hopes. We should be near the point of general intelligence where a shrine or a sanctuary are not deemed essential for such work and where a properly equipped hospital or sanatorium will do equally well.

We are losing much by not having the proper training and the proper mental attitude to enable us to take care of the weak brothers and weak sisters who constitute such a large proportion of our clientele.

They think that we have bartered away our birthright for the pottage of cold science and intellectual achievements and charge that since the snake was sacred to Aesculapius, therefore, the first physician was the devil. Who but a physician would have invaded the privacy of Eden? Had Adam no rights and Eve no privileges? What was the snake doing there anyway? We can only surmise and recall the case of the old Scot near the border, when he said to his son who was leaving him to settle as a physician in England: "Gang awa', mon, gang awa' and avenge Flodden."

We have dramatized ourselves rather enthusiastically. That we should dramatize ourselves is all right, for "all the world's a stage * * * and one man in his time plays many parts." Few men in ordinary life play more parts than the physician and that he should cast himself in a stellar role in many plays is good, for it gives him practice that may enable him when the occasion comes to act the hero gracefully. We all dramatize almost

from the cradle, almost to the grave, and I have seen a few brave souls keep up the play acting even as the curtain was descending. A physician was returning from a visit to a sick confrere and met Sandy on the street, who stopped him and inquired about the condition of him who was ill. The physician replied that his friend, Dr. Smith, was very ill, and in fact that he was lying at death's door. "Ah," said Sandy, "there's nerve for you, at death's door and still lying!"

Realizing and acknowledging present day conditions it is about time, not to stop the play, but to change the settings. I doubt if Booth or Barrett with their old paraphernalia could compete with the modern movies. Bill Hart with his wide sombrero and lariat would gather the ducats while the true artists expounded pure art for art's sake to empty seats.

A shift of position that seems reasonable is, a little more elasticity and possibly liberality for those who would enter the study of medicine. I can conceive of a man entering the profession from various angles with equally good results. We demand a hard and fast requirement of a high school course or a certain time in college, which is all right in its way, but I dare say that many of you have at some time in your life been teachers and know the vast difference between the certificate of one high school as compared with that from another, or for that matter the difference in two graduates from the same school, yet each is admitted with equal rights while a young fellow who by industry and hard knocks had acquired a really useful fund of general knowledge and experience but did not have the diploma, would be denied admission unless he consulted Sach et al.

I submit for consideration the idea that the State Educational Department, the State University and the recognized medical colleges be permitted from their own faculties to form a kind of general intelligence board with power to pass on these matters. The idea being to make it difficult for a man with a diploma who can not intelligently read aloud a selection from a standard author or write a page of correct English composition to enter medical college, and thereby leave room in our crowded classes for one who is really intelligent.

Many of the more progressive states maintain full time medical courses under the control of their state universities, thus materially reducing the cost to the student—an expense that has become almost prohibitive except to those of independent means. The Class A schools in Missouri are probably charging as little as they can and exist, and yet are not able to accommodate all who seek admission.

I do not believe that the cost will deter many who have the real urge for the healing art, but it does put them through school in such financial straits that their activities are solely hampered for years. Our own State University teaches the first two years only, after which the students must scramble as best they may into full time schools that are already full to capacity with their own students. I know of one young man from a prominent and well-to-do family who has completed the two years at our University and is now taking his third year, *mirabile dictu*, in Arkansas, because there was no other place he could enter. The public is interested in this as much or more than the physician for from them must come the higher fees that are made necessary on account of the increased cost of medical training.

We already have a two-year course under the control of the curators of the University, and the rich state of Missouri can not afford the reputation among her sister states of doing things by halves. We have a large city with a world of clinical material almost untouched and a profession second to none in the world, where such an institution if builded and equipped as Missouri could well afford to do, on account of the geographical location would soon be one of the largest institutions in the country.

On theoretical grounds it might also be urged that the saving to the individual student would be such that he might reasonably be expected to be better able to survive the first few lean years after leaving college without being compelled to sell whiskey prescriptions in order to live—a practice that has become to many a venial sin because of a damnable incubus that has been hung about the neck of the medical profession of the United States and from which, if we were now free, fifty years would be needed before we would regain the popular confidence and esteem it has cost us. A system that has made the physician the purveyor and the drug store a grog shop.

It would be a very desirable change if we were held in more esteem by the public press than we are. It may be that our present status is not altogether on account of the fact that we do not spend our money for advertising, but because we have not taken the time and trouble to explain our position, but have rather assumed that it would be understood and appreciated.

With apologies to the Bard of Avon the modern Cassius might well say "the fault, dear doctor, is with us and not with our stars that we are underlings." We have neglected to make the necessary astronomical observations

and charted a course with the press that has led us onto reefs and into shallows, and yet the course was laid with the best intentions and the most altruistic motives. Furthermore, it is right and susceptible of defense. Millions of dollars are wasted annually by people who are not really ill and, what is more pitiable, by hopeless invalids, because of misleading advertisements of wonderful cures and magical remedies exploited by the rankest of quacks and charlatans. Probably there are not many who are physically injured by these things, as the remedies are in the majority of instances harmless, but the people are none the less robbed. I saw a poor family not long ago who had mortgaged their little unproductive farm on a post oak ridge twenty miles from a railroad, and given all the money to one of these quacks on a guarantee to cure a hopelessly paralyzed child and had received in return a hypodermic syringe and a six ounce bottle of water. An investigation by the resident physician disclosed the fact that this charlatan had gone out of this backwoods community with from twelve to fifteen thousand dollars. He was exceedingly liberal in buying newspaper space and printing flamboyant hand bills, and to this fact he owed much of his success. I wonder if such editors have any qualms?

It is true that many of the better class of lay publications have purged their columns of this kind of matter and my suggestion is that we combine with them to the end that we may induce them, through their organization, to carry the matter down to the smaller publications to the end that we may stop this great economic waste.

Recently when a smallpox epidemic threatened my community, at the instigation of the local medical society I wrote a short article on vaccination. When it was handed to the local editor with an explanation of its import he refused to read it, and said he would not print it because the doctors were only attempting to get a little cheap advertising. When I quit writing prescriptions and begin to write prescriptions that editor's name, like Abou Ben Adem's, will lead all the rest.

To master the intricacies of the human body and the facts now known about disease challenges the best intellects the world produces. Its problems are as intricate as are those of the physicist that would break the atom or of the astronomer who would discover a new world. On the efficiency of the individual physician depends not only the welfare of his patient but the safety of the community, for most people who are ill not only have their own lives jeopardized but are a menace to their neighbors.

The best thought of the world has decreed that proper diagnosis can be made, proper remedies prescribed and timely quarantine established only by those who have had extensive training and adequate experience. It is only reasonable, since physicians are expected to furnish such protection, to demand that all those who would treat the sick should have the same preliminary training for admission, the same study of the essential branches of medical knowledge, and the same experience and be licensed by the same board, regardless of the form of treatment they may see fit to advocate or follow. Such to me is the ideal, but it must be regarded as reasonable and be demanded by the public, for if fostered only by physicians, though it may be couched in the dulcet tones of angels and bear upon its wings the balm of healing, it will never become a law, because every healer outside the regular physician will rush to arms to oppose such a measure, although some of them claim to teach such essentials as anatomy, physiology, chemistry and hygiene, and other studies, and even boast that they teach them more thoroughly, yet they become alarmed and perfectly organized for opposition when anything threatens that would put them to the test.

I have heard that Germany had a very efficient system for the rapid mobilization of her soldiers but in her palmiest days she was not more facile at gathering her forces than the limited practice cults at mobilizing about a legislature that is contemplating the enactment of an adequate public health measure. At one time last winter the Christian Scientists claimed to have had three hundred people at the Missouri Legislature, and from personal observation I am inclined to believe that they were all there. On one or two especially lucky occasions we have had a dozen physicians at the legislature at one time advocating the enactment of some measure for the protection of people, who to say the least, are exceedingly indifferent about being protected. Physicians asking for health measure from a legislature reminds me of a beggar asking for alms from a county poor-house, although commissions, foundations, societies and even legislatures are engaged in investigations of medical curriculums. Of course some explanation of this can be found in the fact that the physician expects to function whether adequate health laws are enacted or not, while with adequate health laws the other man, like Othello, sees his occupation gone.

My year of service as President of the Missouri State Medical Association will end in a few hours, and I shall turn it over to my successor with a feeling that all is well. What-

ever of change I have suggested is made with no feeling of pessimism or discouragement. We have been some thousands, probably some millions of years coming up this far, although we have not gone a great distance, yet we have gone progressively upward and will continue to advance. He who is discouraged because a general panacea for all the ills that affect mankind can not be put to work in one generation needs the services of a psychoanalyst. I will be able to bequeath to my successor an asset that no one else who has ever been president was able to do, and that is a well organized, well officered and enthusiastic Woman's Auxiliary that will do much to increase the general knowledge of the important subjects of public health and hygiene.

I count it indeed a rare privilege, as it is a genuine pleasure, to meet and mingle at least once a year with the men who constitute the Missouri State Medical Association, for whose integrity, ability and influence I have the most profound respect; and if for no other than a selfish reason I could wish that every doctor in this commonwealth might be, as in my opinion he ought to be, a member of this Association.

Truly man's inhumanity to man makes countless millions mourn, and man's ignorance makes countless billions ill, and it is the province of the true physician in so far as in him lies to mellow the acts of mankind and to continue as he has always been a philosopher and guide, a confessor and friend. His home should be the center of the social and intellectual life of his community and his office a city of refuge into which come the saint and the sinner, the unhappy and distressed, the sick and the halt. The skeleton from the family closet, the wail for the departed and the pean of joy for the new-born. Into his ears under the seal of professional confidence that no true physician will ever violate, come the stories that tell of the selfishness and the sordidness, the distress and the pain, the misfortune and the misery, the depravity and the perversion, the constancy and the infidelity, the hopes and the fears of mankind.

"Canst thou not minister to a mind diseased,
Pluck from the memory a rooted sorrow,
Raze out the written troubles of the brain,
And with some sweet oblivious antidote
Cleanse the stuff'd breast of that perilous stuff
Which weighs upon the heart?"

is only one of the questions he must answer, for although he holds no degree of divinity he must administer spiritual comfort; though his curriculum contains no law, he must settle many cases out of court; though harrassed by the sick, the querulous and the unreasonable,

he must cultivate an urbanity that is never lost. Though storms of spiritual hysteria, political delusion and medical nihilism sweep across the bosom of a troubled world, the doctor of all others must stand firm and unshaken and be true to the eternal and everlasting verities.

CATARACT EXTRACTION WITH A ROUND PUPIL

EVAN S. CONNELL, M.D.

KANSAS CITY, MO.

The extraction of a senile cataract with the preservation of a round pupil dates back to the time of Beer. Von Graefe was the first to do a routine iridectomy. He did so as a matter of necessity owing to the peripheral situation of his section. I will not adhere strictly to the question of the round pupil, but will include those changes in technique and in treatment which are the result of the two propositions stated below.

A consideration of my successes and failures in cataract surgery has impressed on me two facts: First, those extractions done with the least trauma give the best result. Second, an eye upon which an extraction has been done should be treated on the same general principles as a penetrating wound of the eyeball. As instrumentation produces trauma, simplification of technique follows and this led me to the elimination of iridectomy whenever possible. I do not propose the elimination of iridectomy as applicable to all cases, but it is possible in those with an iris that can be freely dilated. In such cases, it is, I believe, the ideal thing to do. Fuchs¹ makes the following statement: "Flap extraction without iridectomy gives, under favorable circumstances, the most perfect result." The routine use of one method to the exclusion of all others is a mistake. Keeping in mind the idea of limiting instrumentation and manipulation of the eyeball, and also bearing in mind the idea that the extraction should be treated as a penetrating wound, I have adopted the following technique which is applicable to the majority of senile cataracts:

Preparation of the patient. Sodium salicylate, 30 grains per day, four days to one week before operation. The patient is instructed in control of the eyelids and eye movements, that is, he is instructed to open and close the eyelids slowly and without squeezing, and to look straight before him, up, down, to the right, to the left, and to do this slowly and deliberately. I stress particularly that he is to wait until I have completed my instructions before

making any given eye movement. One hour before operation, an H.M.C. tablet No. 2 is given by mouth. Atropin 1 per cent. is instilled in the eye one hour before operation.

Anesthesia. Beginning forty minutes before operation, 1 drop of a 4 per cent. solution of cocain hydrochloride (freshly prepared) is instilled every ten minutes. At the first and last instillation, 1 drop of a 1:1000 adrenalin chloride is also dropped in the eye. After the cleansing has been completed in the operating room, a 1 per cent. solution of novocain is injected beneath the conjunctiva at the superior limbus, enough to form a distinct bleb.

Cleansing. Eyelids are washed with green soap and water. The face adjacent to the lids is wiped with an alcohol sponge. The conjunctival sac is irrigated with a saturated solution of boric acid or normal saline (warm). The boric acid and saline solutions are non-irritating, and therefore do not produce lid spasm. It is the mechanical cleansing that is effective. Eyelashes and eyebrows, if long, are clipped.

Section. This is the most important step in the cataract operation. I make the section without fixation forceps in selected cases. A No. 5 Graefe knife is used and a large corneal flap made, keeping just within the limbus until the superior portion is reached. Then the cutting edge of the knife is rotated backward and brought out behind the limbus picking up a conjunctival flap.

The anterior capsule is now opened with a cystotome and the lens expressed by placing the wire loop above and gently depressing the posterior lip of the section and a Daviel spoon below the cornea and gently pressing upward and backward. The direction of pressure then is toward the centre of the eyeball and, I believe, is a factor in preventing dislocation of the lens into the vitreous.

The lens usually slips through the section without difficulty, lodging on the wire loop, and is lifted away. If large pieces of lens matter are left in the anterior chamber, they are removed by gently stroking the cornea with the Daviel spoon. The anterior chamber is not irrigated. The iris, if prolapsed, is replaced with a spatula, the conjunctival flap laid back in position, and the eye closed. Both eyes are bandaged. The eye is inspected at the end of forty-eight hours. The lids, which are usually found glued together, are gently opened, and the accumulated mucus wiped away. This is important in preventing post-operative infection, as the mucus in the cilia is a favorable medium for bacterial growth. A 1 per cent. atropin is then instilled, and the eye closed. This treatment is carried out daily. On the

fifth day, the unoperated eye is allowed to remain open, and on the seventh day, the operated eye is permitted to remain open, protecting lenses being substituted for the bandage. Atropin and sodium salicylate are continued until the eye becomes quiet. Needling is also postponed until the eye has become quiet.

The advantages of the above technique may be summarized as follows:

1. *Sodium salicylate.* This is used because of its known value in sympathetic ophthalmia and, as previously stated, I consider a cataract extraction as a penetrating wound. I have found it of value in treating cases of iritis due to focal infection. Therefore, I use it here as a preventive in case some focal infection has been overlooked.

2. *Elimination of iridectomy.* This means first of all less intra-ocular manipulation. There is no hemorrhage, as from a cut iris, to obscure the field. There is less chance of losing vitreous, for two reasons, namely, less manipulation, and the intact iris lends additional support to the zonule and posterior capsule. A round pupil is obtained.

3. *The use of Atropin.* To keep the ciliary body quiet just as we use it in penetrating wounds, and to prevent adhesions between the iris and the posterior capsule. It gives a large pupil through which to deliver the lens. There is less tendency to prolapse of an iris well dilated.

Returning now to the question of the round pupil, I believe it has the following advantages:

1. *Functional.* (a) Elimination of dazzling. (b.) A mobile pupil. (c.) Better vision.

2. *Cosmetic.* The pupil is of normal appearance. It is quite impossible to know that these patients have had an extraction except on close examination.

The following objections have been raised to doing without iridectomy:

First. Delivery of the lens is more difficult because of a narrow pupil. I do not operate with a narrow pupil. The use of cocaine and atropin as described gives a dilated pupil through which the lens is easily delivered. The iris is at no time contracted with a miotic.

Second. *Prolapse of the iris.* This does not occur if the iris is replaced thoroughly at operation and if a good conjunctival flap has been obtained so that the section closes rapidly. On this question I wish to quote Campbell,² of Toronto: "*Dilating the Pupil Beforehand.*" To this I can find no serious objection. Prolapse of a well dilated iris is actually less likely to occur and it is certainly easier to get across, and I feel sure that there is less chance of slicing the iris in cutting out, older teaching to the

contrary." In this same connection, I wish also to quote Lieut. Col. H. Herbert:³ "If in senile cataract extraction by the simple method anything nearly approaching this extreme dilatation were obtained, the prevention of iris prolapse would probably be more certain than by the use of eserine—since returning to this country in April, 1919, I have been endeavoring to obtain such dilatation. * * * The method has not been very successful in preventing prolapse, but such prolapses as have occurred have been extraordinarily small."

Peripheral buttonhole iridectomy⁴ is recommended by some to prevent prolapse. It is an improvement over the usual iridectomy in that it preserves a round pupil. It has the same disadvantages as instrumentation and manipulation. I consider it unnecessary when the section is properly made and the pupil dilated and kept dilated with atropin.

Third. *Secondary glaucoma*. It occurs in cases which have had an iridectomy and just as frequently as in cases without. A corneal paracentesis is usually all that is necessary to reduce tension.

Fourth. *Adherent iris*. As stated at the beginning of this paper, the operation without iridectomy should not be done in cases with iritic adhesions.

The question of the round pupil is well summarized in the words of Meding:⁵ "Whatever the theories for and against iridectomy, we have every evidence that many cases do as well without as others do with it. * * * Experience will show you that at least in eyes with fully dilatable iris you can safely omit iridectomy. There may be other contributing conditions, but of this one I am convinced."

In closing I wish to emphasize again the following, viz., the administration of salicylates, the preoperative dilatation of the pupil, and the elimination of iridectomy, this last giving the patient the advantage of a round pupil.

607-8 Commerce Building.

REFERENCES

1. Fuchs—Text Book of Ophth., p. 908.
2. Campbell—Technique of Cataract Operations, Canadian M. A. J. 12:10-11.
3. Lieut. Col. H. Herbert—Additional notes on Free Instillation of Cocaine with Adrenalin, and Eserine in Cataract Extraction, British J. of Ophth., 4:75-78.
4. Meller—Ophthalmic Surgery, 3d Ed.
5. Meding—The Better Surgery of Cataract Extraction, M. A. J. of Ophth. Vol. 6, No. 10, October, 1923.
1. Barraquer. Phakoerisis, Am. J. of Ophth., 3:721.
- O'Connor. The Safest Method of Cataract Extraction. Am. J. Ophth., 3:726-732.
- Payne. Causes of Loss of Vitreous Humor, Prolapse of the Iris and Subsequent Membrane Formations in Cataract Extractions. New York Medical Journal 115:466-469.
- McReynolds. Professor Barraquer of Barcelona and His Method of Phakoerisis, Am. J. of Ophth. 5:83-90.
- Hardy. Consideration of Cataract Procedures, Am. J. of Ophth. 5:961-967.

PERICOLIC ADHESIONS AS A FACTOR IN DIAGNOSIS OF CHRONIC APPENDICITIS AND AS A FACTOR IN THE FAILURE TO OBTAIN RELIEF BY REMOVAL OF THE APPENDIX IN SOME CASES*

CLEVELAND H. SHUTT, M.D.

ST. LOUIS

Reports from large surgical clinics show that almost daily patients who have had the appendix removed without relief from their symptoms, appear for further diagnosis and treatment.

About ten years ago many physicians and surgeons found that they were getting too many unfavorable results with their patients who had been operated for chronic appendicitis. They began a more critical study of their cases before operation and the abdomen was more thoroughly explored through a larger incision. Much improvement was noted, but this progress, has been far from general.

Pathologists have found evidences of pre-existing appendicitis in from 75 to 85 per cent. of all persons past 60 years of age. Some have said that if we include obliteration of the lumen and thickening of the wall, then every appendix in late adult life shows changes from the normal. Reliable pathologists state that at the age of 40 but few people have a perfectly normal appendix. In one clinic, where the appendix was removed as a matter of routine in 500 consecutive pelvic operations and where none of the cases showed any clinical evidences of appendicitis, 167 showed gross pathology. In another clinic 500 appendices were removed as a course of routine in other operations and where no clinical symptoms of appendicitis existed. The pathologist reported 76 per cent. as showing chronic inflammation. It is evident, therefore, that the anatomic condition of the appendix may bear but slight relation to the clinical history of the patient.

Many practitioners have found that a far too large percentage of patients submitted for removal of appendix for symptoms of chronic disorders, have had little or no relief from symptoms and, in fact, some have been made worse. It seems necessary that a definite line be drawn between the clinical symptoms and the pathological concept of chronic appendicitis. Justification for removal of the appendix must rest not on the pathological condition of the appendix as found by the surgeon or

*Read before the St. Louis Medical Society, January 27, 1925.

pathologist, but by the actual clinical relief following the operation. If the patient is not cured or markedly improved from his symptoms, he was not suffering from chronic appendicitis alone.

If operations for removal of the appendix alone were limited to acute attacks, or to the interval after definite attacks, a larger portion of permanent cures as testified by the patients would result.

The X-ray has been found unreliable in these cases, as proven by reports from leading clinics and statements of those who are doing constant research work in the X-ray.

There does not seem to be any group of symptoms upon which one can rely in making

which can and has only too often formed the basis of plans for removal of appendix. The physician and surgeon handling the case have found, much to their chagrin and discomfiture, that the symptoms have survived the operation, and return with the patient for further treatment, or the patient may wander about from physician to cultist and back again for other than financial relief.

Reports from those doing reliable work in large clinics show a considerable percentage of misleading X-ray reports as to appendicitis. Experienced X-ray men state that at least 50 per cent. of all appendices can be visualized. The X-ray man as his greatest contribution to chronic appendicitis or bowel conditions can make certain anatomic observations and describe them as accurately as possible. The clinician has to determine the relative value of such findings after a thorough study and survey of all physical findings and the clinical history.

The responsibility in the last analysis must, therefore, rest on the clinician. It is evident that right iliac pain as a guide for the removal of the appendix without further study and more extended exploratory examination, is unreliable in 35 to 50 per cent. of cases. Many of the failures to give proper relief by surgical procedures for distress in the right iliac region are due to the fact that the case has been hastily examined and superficially studied.

It is generally well known that other pathological conditions, such as affections of the ureter, pelvic growths, enlarged lymph nodes along the iliac vessels, bowel and mesenteric growths, pathologic membranes about the head of the cecum, and even conditions of the gallbladder and stomach, have to be considered thoroughly in many cases where distress in the region of the appendix is given as the main complaint. Another condition which has been but little mentioned, and in fact perhaps first accurately described by Davison and Royer, of Chicago, in 1923, is that of definite thick bands of adhesions about the ascending and hepatic flexure of the colon. They make the following statements concerning this condition: "Within the past two years, our attention has been drawn to a group of cases which seem to present a *new and definite surgical entity*. The interest in this group of cases was initiated by our observation of a number of patients who had failed of relief from symptoms following operation for acute or chronic appendicitis. The symptoms are those of a vague abdominal condition on the right side and were alike in those that had been operated on for appendicitis with no relief and in those who present themselves with

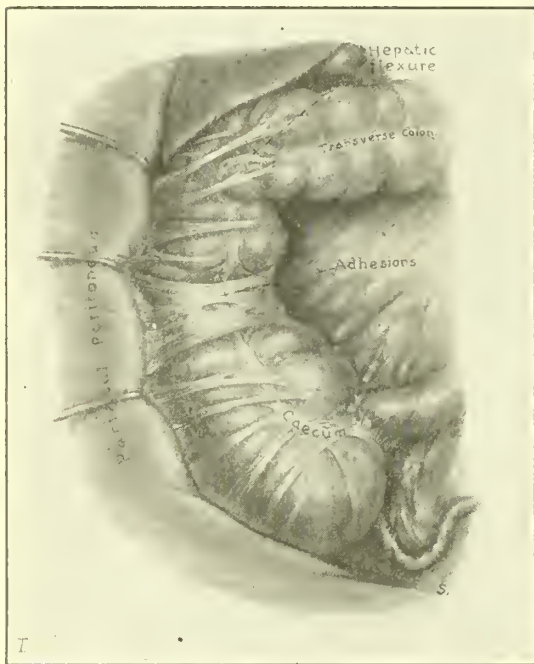


Fig. 1. Scattered bands of pericolic adhesions extending from head of cecum up to and attached to the beginning of transverse colon.

a positive diagnosis of chronic appendicitis with a view of doing nothing more than remove the appendix and with a certain prospect of relief of symptoms for the patient. Right iliac distress, tenderness over McBurney's point, chronic indigestion, visualization of the appendix by the X-ray, weakness and general lack of energy, will not provide a basis for appendectomy with relief of symptoms in a satisfactory percentage of cases. One examination cannot afford a sufficient basis for definite conclusions and operative recommendation. Repeated examinations and observations made over a period of time are advisable, since other pathologic processes may and do frequently provide a clinical picture

no history of previous operation. In some instances the patients have been treated medically for a chronic gastro-intestinal disorder, such as peptic ulcer, colitis, chronic constipation, or gall tract disease. The relief under medical treatment has been temporary or negative. In most instances the X-ray revealed anatomic changes in the ascending colon. Davison and Royer are quite enthusiastic about the value of the X-ray in the diagnosis of these adhesions. I have had several cases where the X-ray findings were entirely negative."

My own experience with this condition dates from May, 1915, and to date I have recorded 16 cases, a few of the more striking of which I will describe briefly:

Number 1. Mrs. J. married, 2 children, 32 years of age, was referred to me by Dr. K. in April, 1915, with a diagnosis of chronic appendicitis. There was a definite tenderness on deep pressure over the region of the appendix and ascending colon. No fever, patient unable to continue with all of her household duties for about 6 months; had suffered much from chronic constipation for past 10 years; history of severe bowel trouble when a child. After 2 weeks of observation, a diagnosis of chronic appendicitis was made and she was operated. The appendix was found normal, also the head of the cecum, and there was no Jackson's membrane. The abdominal incision was enlarged, and the ascending colon was found immobile about the middle and could not be brought forward into the wound. A definite membrane about 3 inches wide at the base, originating from parietal peritoneum well back and extending forward over the colon about the middle, and definitely obscuring the tanei-coli for about 2 inches, was found. This membrane gave exactly the glistening appearance of a normal peritoneum. It had a free blood supply and was about 3 mm. in thickness. After a little manipulation, the examining finger and a forcep were easily passed in between the bowel and the adhesion band. It was so broad and thick that it had to be severed between forceps and the edges sewed over. After this was done the bowel could be brought forward easily into the wound and became normally distended. After freeing the bowel completely and covering over the severed edges of the adhesion band, the wound was closed without drainage and the patient made an uneventful recovery, not only from operation but also from the symptoms as well. Within 3 weeks she was able to return to her household duties and since that time has borne 2 children. She has been under my close observation since the operation. The middle adhesion in Fig. 1 gives a fairly accurate idea of the adhesion band in this case. Following this case, I have made it a matter of routine not only to observe the clinical symptoms and make repeated examinations but to make an incision large enough to examine all of the abdominal viscera on the right side in all cases of chronic complaint in this region.

I have had several cases where the appendix was definitely affected, where a Jackson's membrane was found at the head of the cecum and also where either one or a number of bands of peri-colic adhesions existed such as are found illustrated in both Figs. 1 and 2. Fig. 2 illustrates a case where definite kinking of the

hepatic flexure has been produced, due to a thoroughly well organized band of adhesions.

Perhaps the most interesting case of my series came under observation in August of 1920.

Case 2. Miss A., about 38 years of age, single, weight about 170 pounds; temperature to 103½ degrees F., nausea and some jaundice. There was a history of chronic constipation and right-sided distress, which had existed for 5 or 6 years. Due to this distress on the right side, her appendix had been removed 4 years prior. Following this, there was no relief of symptoms; in fact she became gradually worse and a pelvic operation, for possible fibroids, had been performed 2 years prior. She was acutely ill and the immediate condition demanded attention. She was taken to the hospital where I op-



Fig. 2. Dense pericolic adhesions at the hepatic flexure.

erated on her for the first time and removed an acutely infected gallbladder containing no stones. Her condition would not permit of any extended exploration. However, I noticed quite a number of adhesions in the region of the head of the cecum and lower abdomen. These adhesions were between the omentum and abdominal wall as far as could be determined at that time. She made a good recovery from the operation, but in a few weeks was again complaining of distress on the right side. Constipation gradually became more severe, she was unable to return to work and within 3 months she developed definite attacks of pylorospasm. These continued under highly restricted diet and were brought on by a few swallows of water or other liquid. It was necessary to use hot applications and finally morphin to give relief. She was placed in the hands of a competent internist, who after a number of weeks, could obtain no satisfactory relief through medical or dietary treatment. Partial obstruction, due to ad-

hensions, was considered and a fourth operation recommended with some reluctance, to which the patient readily assented. By this time she had lost considerable weight and was suffering severe pain daily and frequently at night. She had to remain in bed most of the time and could take no solid food. An incision about 5 inches in length was made through the right rectus, near the external border. A number of adhesions resulting from previous operations were found and some of them loosened; however, none of these adhesions were found to be causing any interference with the circulation of bowel contents. A search was then made for pericolic adhesions. One broad and several narrow bands of dense adhesions were found along the ascending colon, which was found rather closely bound down. One of the bands was producing marked kinking of the bowel. After the adhesion bands were released the bowel could be brought forward easily into the wound. No other kinking or other patho-

constipation were the major symptoms. X-ray was negative. Urine negative, no mass. A diagnosis of peri-colic adhesion was made and confirmed at operation. The adhesions were found partly constricting the colon just as it dipped over the pelvic brim. The adhesion bands were released, further explorations were made of the pelvic and other viscera. The patient, a single woman of 27, made a good recovery from the operation and is satisfied with the relief of symptoms, although if she becomes a little constipated there is some distress, but not marked.

The third striking case which I wish to report is illustrated in Fig. 3. This patient was referred to me in October, 1922, by Dr. S. with a diagnosis of obstruction of the bowel. The patient was a man, 21 years of age, who had suffered for years from chronic constipation. When I saw him the abdomen was very distended with gas. No mass could be felt. Temperature of $97\frac{1}{2}$, pulse 120. He had been vomiting for 2 days. An exploratory incision was made and upon reasonable search, no tumor mass, no volvulus or kinking could be found other than a dense broad band of peri-colic adhesions, about the middle of the ascending colon. There was a dense scar formation, as illustrated, in the middle of these adhesions as they reached over the bowel. There was no adhesion to other viscera. A large amount of bowel contents could be felt, massed in the cecum, below the broad band of the adhesion, which without question was acting as a boom in restricting the lumen of the bowel by at least $\frac{2}{3}$ to $\frac{3}{4}$ of the normal. The adhesion bands were quickly released, the wound closed rapidly and patient returned to bed. He died about 6 hours later. An autopsy could not be obtained.

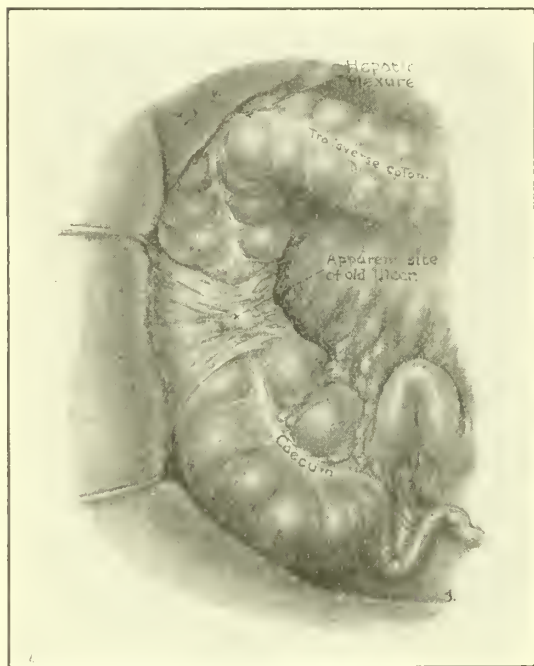


Fig. 3. Definite dense pericolic band, evidently of inflammatory origin; in this case causing death due to impaction.

logical conditions could be found in the abdomen. The wound was closed and she made an uneventful and rapid recovery both from the operation and the symptoms referred to the right side. Within 10 days she was taking a general diet and raw fruit without any abdominal distress. She left the hospital within 2 weeks, went to work within 2 months; has gained her normal weight and more. She has been able to earn her living, pay off some of her previous and present doctor bills, and considers herself entirely cured of the condition which she stoutly declares existed before her first operation, at which time only the appendix was removed.

In 1922, a patient was referred to me with definite pain over the descending colon, at the point where the colon dips over the brim of the pelvis to become the sigmoid. Pain and

In my experience with 16 cases since 1915 there has been one death from obstruction, which was most probably due to a very definite broad band of peri-colic adhesions. All other patients have made good recoveries from operations and in addition have been either completely relieved, or relieved to such an extent that by reasonable care with diet and moderate bowel elimination, they have been able to get along without incapacity or discomfort and have ceased to complain either to their family physician or myself, as to their former symptoms.

These bands of adhesions have been observed by a number of interested physicians, as well as by Dr. Robert Mueller, who has assisted me with a number of these cases. As to their origin, no one has been able to prove definitely any opinion. My opinion is that they are not embryonic in origin, but due to severe cases of colitis, which have occurred in infancy, producing a plastic exudate on the colon from which adhesions developed sufficiently strong to produce some constriction of the bowel lumen. My cases have ranged in age from 19 to 65 years. In later years as

constipation is more marked, the local irritation becomes more severe and perhaps this adds to the density of the adhesions.

CONCLUSIONS

No case of chronic appendicitis should be operated without careful and if possible repeated examination.

The clinical record, physical findings and X-ray examination need all be considered. There are cases where the X-ray is of no value.

Peri-colic adhesions form a definite pathological entity. They should be considered in all chronic conditions about the appendix and should be searched for in all operations for chronic appendicitis.

Peri-colic adhesions frequently exist without any trouble with the appendix and if not relieved removal of the appendix affords no relief for the patient.

Peri-colic adhesion cases make good recoveries when properly operated and managed during the period of operative convalescence.

Metropolitan Bldg.

THE TREATMENT OF TETANUS

JOSEPH L. FERRIS, M.D.

ST. LOUIS

AND

ARTHUR L. FUERTH, M.D.

CAPE GIRARDEAU, MO.

During a service at the St. Louis City Hospital extending over a period of five years, the authors had an opportunity to observe, treat and review the records of seventy-one cases of tetanus.

These cases were studied with particular reference to prophylaxis, incubation period, the type of wound causing the disease, symptoms, treatment (lowered mortality following the use of large doses of antitetanic serum) and anaphylaxis.

PROPHYLAXIS

The prophylactic effect of antitetanic serum is so evident that but little discussion is necessary to convince one of its value. Behring and Kitasato were first to show the protective and curative effects of the blood serum of immunized animals. It was found that animals could be protected from tetanus infection by the previous or simultaneous injection of tetanus antitoxin, provided that such antitoxic serum was obtained from a thoroughly immunized animal. This neutralization was due

to a chemical union between the two substances. From this it was assumed that the same result could be produced in natural tetanus in man. Unfortunately, however, the conditions in the natural disease are very much less favorable, inasmuch as treatment is usually commenced not shortly after the infection has taken place but many hours after the appearance of tetanic symptoms, when the poison has already attacked the cells of the central nervous system and permanently combined with them.

According to Leighton¹ the prophylactic use of antitetanic serum in traumata, especially in Fourth of July injuries, was advocated and to the credit of St. Louis it was first employed by one of our city dispensary physicians in this connection. In the year of 1903 there were 56 Fourth of July injuries in St. Louis of which 16 died of tetanus. In the following three years, with the adoption of the prophylactic antitetanic serum in 297 Fourth of July injuries not a single case of tetanus developed. Since this time the value of prophylactic doses of antitetanic serum has been emphasized again and again; and the results lead the *Journal of the A. M. A.* to state that there was no authentic case of tetanus following its prophylactic use. In other words, it was 100 per cent. preventive. In our series of cases there were two cases of tetanus following the usual prophylactic dose of 1,500 units of antitetanic serum. Both of these were compound fractures of the lower leg and foot with an incubation period of 14 and 86 days respectively, the former dying on the second day of his disease, the latter recovered.

Stone² has shown that during the World War the instructions called for the injection of antitetanic serum as soon as possible after all war wounds. The usual dose was 1,500 units. This was repeated within ten days. The instructions also called for a repetition of the dose, for patients on whom subsequent operation was done, care being taken to prevent an anaphylactic reaction. That the measures were effective is shown by the results obtained for, among 224,089 war wounds, only thirty-six patients developed tetanus, or one to each 6,224 wounds.

During the Civil War, before the introduction of antitetanic serum Sanford³ has shown that among 246,172 war wounds, 505 patients developed tetanus, or one to each 487 wounds. Bazy's⁴ report on 200 soldiers wounded from the same sector during the World War is convincing; that among the one hundred that received the prophylactic dose of antitetanic serum, only one developed tetanus (the day after the injection), while among the one hun-

dred who did not receive the antitetanic serum, eighteen developed tetanus.

Sir David Bruce⁵ has shown that among 2,032,142 wounded, tetanus developed in 2,385, or an incidence of 1.17 per 1000, while previous to the routine use of antitoxin the incidence of tetanus among the wounded was from 15 to 32 per 1000.

It is evident that the laity are becoming more acquainted with the value of antitetanic serum in Fourth of July injuries, as is shown in this series, only seven cases were due to such causes, six cases of tetanus being due to wound inflicted by blank cartridges and one case to a wound caused by the explosion of a fire-cracker while being held in the hand. Only one of these seven cases was treated by a physician, who did not administer the usual prophylactic treatment.

THE PROPHYLACTIC DOSE

In the United States a prophylactic dose of 1,500 units of antitoxin has long been the custom, which is about the quantity sufficient to protect against 2,000 times the minimal fatal dose of toxin for a person weighing 150 pounds. Since practically all of the antitoxic effect is eliminated in eight to ten days after the injection, it is advisable to repeat the dose every ten days in lacerated wounds that contain necrotic tissue, also in cases where a subsequent operation is to be performed, especially in old compound fractures. In this series two cases of tetanus developed after the initial prophylactic dose, with an incubation period of 16 and 86 days respectively.

We now feel that anaphylactic shock occurs only in a small per cent. of cases, death from anaphylaxis being very low when treated in the usual manner. The British statistics show that more than two million prophylactic injections of tetanus antitoxin were given during the war and that only eleven cases of anaphylactic shock occurred, in all of which the patients recovered.

The prophylactic injection plays a definite role on the incubation period, course of the disease and mortality. The British statistics show that among those patients who received a prophylactic dose of 500 units and who subsequently developed tetanus, the average incubation period was 45.5 days; while among those who did not receive the prophylactic dose, the average incubation period was 10.9 days. The prophylactic dose lowered the mortality, which was 53.3 per cent. among those who had not had it, to 22.5 per cent, among those who developed tetanus after receiving it.

TABLE 1. INCUBATION PERIOD AND END RESULTS

Incubation Period.	Number of cases.	Died.	Re-covered.
2 days	2	2	0
4 days	3	2	1
5 days	4	2	2
6 days	5	3	2
7 days	10	6	4
8 days	5	2	3
9 days	3	1	2
10 days	5	3	2
11 days	1	1	0
12 days	4	2	2
13 days	2	2	0
14 days	5	3	2
17 days	1	1	0
18 days	2	2	0
19 days	1	1	0
21 days	2	1	1
26 days	1	0	1
86 days	1	0	1
No. of days unknown.....	14	12	2
	71	46	25

In this series 51 cases had a known incubation period, while 14 cases could not be established due to the type of wound, if any. The shortest incubation was two days and the longest was 86 days. Thirty-eight patients with a known incubation period developed the disease from two to eleven days after their injury, of whom twenty-two died and sixteen recovered, or a mortality of 57.1 per cent. Among fifteen patients whose incubation period was from eleven to and including nineteen days, eleven died and four recovered, or a mortality rate of 73.3 per cent. Among four patients with an incubation of over nineteen days, one died and three recovered, or a mortality rate of 25 per cent. It has long been recognized that the shorter the incubation period the higher was the mortality. The British statistics show that among 128 patients whose incubation period was seven days or under, the mortality was 58.6 per cent. while among 429 patients whose incubation period was thirty-five days or longer the mortality was 15.4 per cent. Excluding the one patient with the eighty-six day incubation period the average interval between injury and the onset of the disease for fifty-seven was 9.93 days. The British statistics during the World War showed that the greatest number developed the disease on the tenth day after the wound.

TABLE 2. TYPES OF INJURY CAUSING TETANUS AND END RESULTS

Injury	No. of cases.	Died.	Re-covered.
Punctured nail wound of foot.....	13*	9	4
Wounds from blank cartridges.....	6	4	2
Lacerated wound of scalp.....	4	2	2
Contusion of finger.....	4	3	1
Hypodermic wounds in morphine addicts	4	1	3
Abrasion of hand.....	4	3	1
Splinter in hand.....	3	2	1
Postoperative	3	2	1
Leg ulcer	2	1	1
Splinter in foot.....	2	2	0
Criminal abortion	2	2	0
Punctured nail wound of hand.....	2	1	1
Compound fracture of arm.....	2	2	0
Compound fracture of leg.....	2	1	1
Lacerated wound of cheek.....	1	1	0
Gunsbot wound of hand.....	1	1	0

<i>Injury</i>	<i>No. of cases.</i>	<i>Died.</i>	<i>Re-covered.</i>
Wound of hand from firecracker.....	1	1	0
Crushing injury of foot.....	1	0	1
Puncture of hand by fall on rake.....	1	0	1
Scratch on thigh.....	1	1	0
Lacerated wound of knee.....	1	1	0
Abrasion of foot due to tight shoes..	1	0	1
Incised wound of lower lip.....	1	1	0
Compound fracture of toe.....	1	0	1
Incised wound of hand.....	1	1	0
Incised wound of foot.....	1	1	0
Frozen feet.....	1	0	1
Crushing injury of leg.....	1	1	0
Unknown.....	4	2	2
	71	46	25

Twenty-five, or 37.3 per cent. of the cases with a known type of injury were due to wounds of the lower extremity, while 20, or 29.7 per cent. followed injury of the upper extremity. Three cases were postoperative, among which was an open reduction on a simple fracture of the femur one year old with vicious union. A virulent tetanus developed ending fatally in seventy-two hours. The second case occurred in a badly infected compound fracture of the leg. In these cases Dr. C. W. Schery, City Bacteriologist, traced the infection to the horse hair in the felt used for padding. The third case was one of internal abdominal injuries, due to a blow on the abdomen from a billiard cue. Tetanus developed twelve days following an exploratory operation, the disease terminating in death on the fourth day. The origin of the infection was not traced. Four cases of tetanus occurred in morphin addicts, the only evidence of entrance of the infection being the hypodermic wound, self administered. In one case the tetanus bacilli were isolated from a splinter taken out of the foot.

INITIAL SURGICAL TREATMENT OF WOUNDS

Since the tetanus bacilli thrive best in tissue lacerated and deprived of its blood supply, under anaerobic conditions, it is a routine practice that all wounds be freed of injured tissues and treated with 3 per cent. tincture of iodine and the application of a sterile bandage. Sir David Bruce has shown that before the practice of primary incision and excision for war wounds, the incidence of tetanus was 103 per 100,000; during the latter months of the war the incidence dropped to 8 per 1000. The cautery should not be used or such chemicals as carbolic acid and silver nitrate, since they produce necrotic tissue.

SYMPTOMS

Neck stiffness and rigidity of jaw muscles were outstanding early symptoms in a large per cent. of cases in this series. Dysphagia, gastric disturbance, tightness of chest on breathing, pains in legs, shoulders and back were observed in a few cases. The deep reflexes were increased. A slight elevation of

temperature, an increased pulse and respiration rate were noted in nearly all cases. As the disease developed, general muscular rigidity of the trunk muscles and opisthotonos were common. Consciousness remained clear throughout the course of the disease in most cases. The pupils were equal, slightly dilated and reacted to light. The superficial and deep reflexes were markedly increased; ankle clonus and pathological toe signs may be present. A moderate leucocytosis was generally found. The spinal fluid was under increased pressure as a rule with a normal cell count and negative globulin.

One case was a localized tetanus limited to the jaw muscles; there was facial nerve spasm. Trismus was an early symptom, temperature was normal, pulse rate was slightly increased. The disease terminated in recovery.

TREATMENT

It is well known that tetanus toxin has a marked affinity for nerve tissue while the peripheral motor nerves have been proved to be the pathways by which it is conducted to the central nervous system. However, on experimental evidence there has been a controversy as to whether the toxin is conducted by means of the axis cylinders or by the neural and perineural lymphatics. From a therapeutic standpoint it matters greatly as to which of these absorption paths is correct, for obviously if tetanus toxin is conducted by the axis cylinders only, antitoxin can be of little value, while if the lymphatics carry it, vigorous antitoxin therapy is indicated. In 1901 thirteen children were killed in St. Louis by injecting the toxin derived from a diseased horse. This demonstrates that the blood carries toxin, the diphtheria antitoxin being made from the blood of a horse.

The work of Meyer and Ransome⁶ seems to show that the conduction is entirely through the axis cylinders. They showed that if tetanus toxin were injected subcutaneously in an extremity, and after some time the nerves of this extremity were removed and the extract injected into another animal, it would develop tetanus. However, Teale and Embleton⁷ proved by reinjection experiments that the injection of toxin in an extremity, within a short time it is present in the blood, liver, spleen, etc., and even in the nerve of the opposite extremity, results which would be impossible if the toxin were conducted entirely by the axis cylinders. In the same research it was demonstrated that blocking the neural and perineural lymph channels by the injection of iodine or colloids delayed the spread of the toxin up the nerve. Furthermore, the experi-

ments of Orr and Rous, confirmed by Teale and Embleton, showed that bacteria can travel along the neutral lymphatic sheath, thus inferring that tetanus toxin with its smaller molecule can do the same. Finally, Robertson⁸ injected the peripheral nerve paths with Richardson's blue and found the lymphatics of the motor nerves to be much larger than in the sensory, which would help to explain the more ready conduction of tetanus toxin by the motor nerve paths.

Thus the latest evidence seems to point to at least a partial conduction of toxin by the lymphatic route. As a basis for therapy it would be safest to take the position that Robertson assumes, namely, that tetanus toxin appears in the blood stream and other tissues and can be neutralized by antitoxin at any stage in its passage before its final and relatively undissociable union with the ganglion cells. Consequently, the greatest indication for treatment is to maintain as high a concentration as possible of antitoxin in the blood and lymph stream. This can most readily be done by large and frequently repeated injections, intravenously, intramuscularly, intraspinally, paraspinally and around the wound.

TABLE 3. MORTALITY ACCORDING TO TOTAL DOSAGE

Total dosage in thousand units.	No. of patients.	Mortality per cent.
From 3 to 15.....	19	73.6
From 15 to 35.....	20	85.
From 35 to 60.....	11	54.5
From 60 to 150.....	12	58.3
From 150 to 350.....	9	0.

As the result of their experimental work Park and Nicoll⁹ advocate early administration of from 3,000 to 5,000 units of antitetanic serum intraspinally, repeated in twenty-four and from 10,000 to 15,000 units intravenously. Three or four days later, in order to continue the antitoxin effect for four or five days longer, a subcutaneous injection of from 10,000 to 15,000 units was advised. They hold that no advantage was gained in giving larger doses. Nicoll¹⁰ in reporting twenty cases of tetanus with a mortality of only 20 per cent. stated that 40,000 units was the usual total dosage given. Sherrington¹¹ has reported some experimental work regarding the relative value of different routes in giving antitetanic serum. Monkeys were injected with eight times the lethal dose of tetanus toxin intramuscularly and in forty-two to seventy-eight hours, antitetanic serum, 20 units per kilo, was injected; the lowest mortality followed the intrathecal and bulbar intrathecal injections.

One may infer from table No. 3 that the tendency to give continued large dosage was more evident the longer the patient lived; however, we have noted that several of the earlier

cases lived several days and ended fatally, but were only given a small amount of antitetanic serum.

The value of magnesium sulphate in our experience was not so conclusive as that of Smith's.¹² Magnesium sulphate in strength varying from 2 to 25 per cent. in amount from 2 to 10 cc. four times in 24 hours. The maximum dose for one patient was 500 cc. Twenty-three cases of this series were given magnesium sulphate, of whom fourteen died, or a mortality of 58.3 per cent. The nine cases that recovered received an average dose of 121,330 units of antitetanic, while the fourteen cases that ended fatally received an average dose of 51,428 units of antitetanic serum.

The following plan of treatment, based on a review of the literature and personal experience, is recommended as a routine procedure in the treatment of this disease:

1. Antitetanic serum should be administered as soon as possible after the onset of symptoms. One-half cc. of antitetanic serum is injected subcutaneously to desensitize the patient. If no anaphylactic symptoms occur then 50,000 units of antitetanic serum are given five different ways, intraspinally, subcutaneously, intramuscularly, intravenously, and around the wound. On the second day the dose is increased by one-half until the dose climbs up pretty high and continued daily until the patient is improved or dead. The lumbar puncture should be performed under local anesthesia, using $\frac{1}{2}$ per cent. novocain solution. If the patient is in opisthotonos, a general anesthesia should be administered. The spinal canal should be drained and the antitetanic serum should be given at body temperature by the gravity method.

2. Fluids should be given by mouth, rectum or subcutaneously.

3. To secure quietness and relaxation, magnesium sulphate (chemically pure) in strength varying from 4 to 25 per cent. given subcutaneously, intramuscularly, intravenously and intraspinally. A 4 to 6 per cent. solution should be used intravenously. The subcutaneous route is the method of choice and the average dose is 10 to 15 cc. four to six times in 24 hours; however the dosage of this drug and that of other drugs that will be mentioned here are only approximate doses. They must be given until the desired effect is reached. Phenobarbital (luminal) grs. 2 every 4 hours. Morphin sulphate grs. $\frac{1}{4}$ every 3 hours. Chloral hydrate drams 3 and sodium bromide drams 3 in 1000 cc. of tap water given by protoctysis. The above sedatives are to be given with caution and not in combination with each other.

4. The surgical treatment of the wound, the excision of injured and necrotic tissues, treated with 3 per cent. tincture of iodine and the application of a sterile dressing.

5. A dark, quiet room, careful nursing. Examination of the urine daily.

6. The total dosage should be 250,000 to 300,000 units. Children should receive nearly as large a dose as adults, as they may have the same amount of toxins to neutralize.

THE MORTALITY FROM TETANUS

In this series forty-six deaths occurred, or a mortality of 64.8 per cent. In considering the death rate many factors are found to play an important role other than the treatment, for instance: 1. The period of time elapsing between the onset of symptoms and the time treatment is begun. 2. The virulence of the infecting organism. 3. The prophylactic injection of antitetanic serum.

The death rate before the introduction of antitetanic serum was about 85 per cent. The British war statistics have shown that among 2,152 soldiers that developed tetanus during the World War 1,011 cases ended fatally or 47 per cent.

Ashhurst¹³ has stated that the amount of antitoxin required to prevent death increases in geometric progression with the lapse of time. If sufficient time has elapsed to allow toxin fixation in the nerve cells of the cord, the mortality will be greatly increased. The small amount of toxin necessary to kill, together with the time factor and inadequate antitoxin dosage, account for the high mortality of the disease. Twenty-nine patients of this series died within forty-eight hours after admittance to the hospital. Seventeen cases were not admitted to the hospital until after a lapse of three or more days following the onset of symptoms.

ANAPHYLAXIS

The British war statistics showed that 2 per cent. of the patients given intraspinal injection of antitetanic serum, 6 per cent. of those given intravenous injections, 1.2 per cent. of those given intramuscular injections, developed anaphylactic shock. The danger of anaphylactic has been over-estimated. Only one patient of this series showed a marked anaphylactic shock, following the injection of 10,000 units of antitetanic serum intravenously. The patient was a white boy, 17 years old, who entered the hospital with a compound fracture of the right foot. He developed tetanus on the 14th day following the usual dose of 1,500 units of antitetanic serum. Within a few

minutes following the administration of the antitoxin intravenously, the patient went into deep shock, pulse became rapid and weak, skin was cold and clammy, respirations were shallow, and lips were cyanosed. He responded immediately to 1/100 gr. of atropin and 15 minims of adrenalin hydrochloride solution (1 to 1000).

Thirty-two patients (45 per cent.) of this series developed an urticaria seven to ten days following the injection of antitoxin.

CONCLUSIONS

1. Antitoxin in prophylactic doses is a specific in the prevention of tetanus. One thousand five hundred units of antitetanic serum should be given to all patients who have suffered lacerated or penetrating wounds. The dose should be repeated in ten days if the wound contains any necrotic material and again before any operative procedure.

2. All wounds should be surgically treated; the injured or necrotic tissue should be excised and treated with 3 per cent. tincture of iodine.

3. The average incubation period is ten days, but it may be as brief as three days and as long as three months.

4. The shorter the incubation period, the greater will be the mortality.

5. The mortality from tetanus has been reduced from 85 per cent. before the introduction of antitetanic serum to 47 per cent. as reported by the British in over 2,000 cases of tetanus.

6. The danger of anaphylactic shock has been over-estimated. Death resulting from shock is very rare.

7. The mortality can be lowered by the routine use of large doses of antitetanic serum.

8. Trismus is the most outstanding early symptom of tetanus.

9. When the disease has developed, an attempt should be made to saturate the patient with antitoxin before fixation of toxin has occurred in the nerve cells of the spinal cord. This is done by giving antitetanic serum intraspinally, intravenously, intramuscularly, subcutaneously and around the wound. Fifty thousand units should be given in the first 24 hours, increase the dose by one-half daily until the patient is improved or dead.

3145 Meramec Street.

BIBLIOGRAPHY

1. Leighton, W. E. *Weekly Bulletin of the St. Louis Medical Society*. 18:13 (September 13) 1923. *The Treatment of Tetanus*.
2. Stone, W. J. *Treatment of Tetanus*, J. A. M. A. 78: 1939, 6-24-'22.
3. Sanford. *Bull. Internat. A. M. Museum* 7: 365, 1918.
4. Bazy. *Bull. et Mem. Soc. de chir. de Paris* 42: 2919, 1916.

5. Bruce, D. J. *Hyg.* 19:1 (July) 1920, and *Brit. M. J.* 1:118 (January 27) 1917.
6. *Arch. Exp. Path. u Pharm.*, 1903, xlix, 367.
7. *Jour. Path. and Bact.*, 1919, i, 23.
8. *Am. Jour. Med. Sc.*, 1916, Cii, 31.
9. Park, W. H., and Nicoll, Matthias, Jr. Experiments on the Curative Value of the Intraspinal Administration of Tetanus Antitoxin. *J. A. M. A.* 63: 235 (July 18) 1914.
10. Nicoll, Matthias, Jr. Intraspinal Administration of Antitoxin in Tetanus. *J. A. M. A.* 64: 1982 (June 12) 1915.
11. *Lancet*, December 2, 1917.
12. Smith, Carroll. Weekly Bulletin of the St. Louis Medical Society, 18:13 (September 13) 1923. The Treatment of Tetanus.
13. Ashhurst, A. P. C. Report on Tetanus. *Arch. Surg.* 1:407 (Nov.) 1920.

TULAREMIA

Edward Francis, Washington, D. C., (*Journal A. M. A.* April 25, 1925), reviews the synonyms and history of tularemia, its geographic distribution in man and rodents, its symptoms and course, the agglutination tests, portal of entry in laboratory workers, insect transmission, immunity, diagnosis laboratory tests and treatment.

POLYCYTHEMIA VERA

There is nothing exceptional in two cases, reported by Gertrude Johnson, Battle Creek, Mich. (*Journal A. M. A.*, April 25, 1925), unless it be that both were in women, while the disease as reported occurs oftenest in men, and that splenomegaly was absent in one. The family history was especially significant in neither. Both patients had had a good deal of illness, with operations. Both had had infections of various kinds. Both had slight albuminuria at times during the course of the disease. In one, the blood pressure was low; in the other, there was some hypertension. Both complained of severe headaches, which from the description would be classified as migraine. Both patients gave a history of menstrual disorder; both had evidence of ovarian deficiency. It seems quite possible that there is an association between endocrine deficiency and polycythemia vera.

PHOSPHORUS POISONING IN CHILD, FROM INGESTION OF FIREWORKS

Hugh L. Dwyer and F. C. Helwig, Kansas City, Kan. (*Journal A. M. A.*, April 25, 1925), report a case of fatal phosphorus poisoning in a child that resulted from swallowing fireworks. In animal experiments performed to determine the value of certain remedial measures and the pathologic changes brought about by phosphorous poisoning, castor oil was found to be ineffective as an antidote, but did not seem to increase the absorption of the drug. Liquid petrolatum and also lavage one or two hours after the lethal dose proved effective. Histologic studies showed that phosphorus produced a marked catarrhal gastritis with superficial epithelial necrosis. The liver showed very pronounced fatty changes, which to a lesser extent were also found in the heart and kidney. Microchemical studies indicated that the bulk of this fat was glycerol ester. Cholesterol determinations on the plasma showed a definite increase twenty-four hours after phosphorus was given.

INTRADERMAL SALT SOLUTION TEST IN LOBAR PNEUMONIA IN CHILDREN

McClure and Aldrich found that the elevation produced by intradermal injection of 0.2 c.c. of an 0.8 per cent aqueous solution of sodium chlorid became impalpable much more quickly in a group of children having edema than in a group of controls. Jeanette Harrison, Chicago (*Journal A. M. A.*

April 25, 1925), undertook to determine whether in lobar pneumonia the test would show changes in the skin indicative of a tendency to edema and of tissue intoxication, and incidentally to determine what effect, if any, fever has on the tissues' avidity for water. In the tests, the technic described by McClure and Aldrich was followed. By this method 0.2 c.c. of sterile 0.8 per cent aqueous solution of sodium chlorid is injected intradermally under aseptic precautions into the flexor surface of the forearm, or in the leg, or in both, and the persistence of the resulting elevation, as determined by its detection by palpation, is accurately timed. The time for the normal child, over 1 year of age, is somewhat more than sixty minutes. The twelve patients tested were all acutely ill children ranging in age from 2 to 14 years. In none was there any edema demonstrable by pitting. In lobar pneumonia in children: There was a considerable shortening of the disappearance time of intradermally injected salt solution. The crisis had no immediate effect on the length of the disappearance time. After the crisis, the return to a normal disappearance time indicates an intoxication of the tissues, which is more persistent than is ordinarily considered to be the case.

GASTRIC TETANY

JOHN B. YOUNG and I. W. GREENE, Ann Arbor, Mich., (*Journal A. M. A.*, March 14, 1925), report a case of gastric tetany successfully treated by the injection of ammonium chlorid intravenously. The patient's past history revealed but one or two facts of importance. She had had the usual children's diseases, including scarlet fever and diphtheria. Four years before, she had complained of occasional epigastric pain, which radiated to the right side. She had borne eight children. Her best weight had been 195 pounds (88.5 kg.) three months before admission. Her weight at the time of examination was 135 pounds (61 kg.). The family history was negative. The nature of the obstruction in this case is worthy of some comment. Although at operation the obstruction apparently occurred in the jejunum, the development of the tetany and the character of the blood changes indicate that probably the obstruction also occurred higher; i. e., at the pylorus. The provisional diagnosis of acidosis at the time of admission is of interest in view of the subsequent finding of alkalosis and the development of tetany. The diagnosis of acidosis was based on the presence of an "acetone breath" and the history of deprivation of food, and was later supported by the finding of a ketonuria. Determination of the pH of the blood could not be obtained, and the nonprotein nitrogen of the blood was not determined. The results from the use of the ammonium chlorid were gratifying. In a few hours the patient changed from a person critically ill to one in a relatively good condition. It is possible that the failure to secure a more prompt recovery was due to the use of too small a dose of the ammonium chlorid. The single injection of 400 c.c. of an 0.82 per cent solution, however, maintained her satisfactory condition for nearly forty-eight hours, and the slight recurrence of the symptoms of tetany following operation promptly disappeared after a second injection of a similar amount. The use of ammonium chlorid is not intended to replace surgical treatment, which is the only means of permanent cure in gastric tetany due to organic pyloric obstruction. In this type of case, ammonium chlorid is of value as a temporary and preoperative treatment. The use of gastric lavage and administration of alkalis is contraindicated in gastric tetany. This does not, of course, preclude the necessary emptying of a distended stomach immediately prior to operation.

THE JOURNAL

OF THE

Missouri State Medical Association

JULY, 1925

EDITORIALS

DR. EMMETT PIPKIN NORTH, Our New President

When the House of Delegates of our Association at the Annual Meeting held in Kansas City May 4, 5, 6, 7, 1925, elected Dr. Emmett P. North, St. Louis, President of the Association for the ensuing year, they conferred this honor upon one who has been identified with the progressive movements of the organization ever since he graduated in medicine. From the very beginning of his medical career he served under leaders who had made history in medical organization and early developed a genius in this respect that has placed him at the head of many movements. Perhaps this is an inherited trait for the father of our new President, Dr. Eugene Benton North, at the time of his death was chief surgeon of the Wabash Railroad.

Dr. Emmett P. North was born in Labadie, Franklin County, Missouri, August 13, 1877, where he spent his early childhood and attended the public schools until he entered Central College, at Fayette, where he completed his preliminary education. His medical education he received at Beaumont Hospital Medical College (now St. Louis University Medical School), from which he graduated in 1900, receiving an appointment as intern in the St. Louis City Hospital immediately thereafter. After completing his internship he was admitted to the staff of the Missouri Pacific Hospital where he spent a year and then joined the staff of the United Railways. Here he rapidly developed and became chief surgeon of the system, a position that he held until 1911. Such a position ordinarily would lead to specializing in surgery but not so with Dr. North. In 1911 he resigned his position with the United Railways and sailed for Europe where he studied for two years in the eye clinics giving all of his time to the study of ophthalmology. Thus equipped he returned to St. Louis and entered private practice.

During all these years he was closely associated with such workers in the organization as Dr. F. J. Lutz, Dr. W. B. Outten, Dr. W. B.

Dorsett and Dr. Jabez N. Jackson, and took an active part in the affairs of the St. Louis Medical Society and the State Association. In 1915 he was elected a member of the Council of the St. Louis Medical Society as well as serving upon numerous committees, and was honored with the presidency of that body in 1921, continuing as a member of the Council until 1925. He was a delegate to the American Medical Association for several terms, a member of the Committee on Scientific Work, Chairman of the Committee for the Prevention of Blindness, and served in other capacities.

He is an instructor in ophthalmology in St. Louis University Medical School and a member of the staff of St. John's Hospital, the Missouri Pacific Hospital and the Masonic Hospital. He represented the State Medical Association as one of the delegates to the Missouri Association for Criminal Justice and is a member of the board of directors of that body. When the medical profession was organized for service in the World War Dr. North applied for a commission in the Medical Corps of the Navy and was admitted with the rank of Lieutenant Commandant, being stationed at the United States Naval Base Hospital at Algiers, La.

In his activities that brought him in touch with the public Dr. North was, in the opinion of some people, unfortunate because of the unusually heavy burden thrown upon him by virtue of being President of the State Board of Health during the scandal that followed the exposure of the traffic in medical diplomas. He was appointed a member of the State Board of Health by Governor Gardner in 1918 and became President of the Board in 1920, which position he still retains, Governor Hyde having reappointed him in 1922 for a term of four years.

The diploma mill scandal made the position of every member of the State Board of Health an onerous one but our President seems to have utilized the opportunity for demonstrating that he was a demon for work and for more than two and one-half years gave practically his entire time to the labor necessary to remove the stain that had sullied the good name of the medical profession of Missouri. His efforts culminated in the trial of over sixty physicians whose diplomas, it was charged, had been obtained fraudulently, and the revocation of the licenses of several who were generally known as the "diploma mill ring."

It is characteristic of Dr. North that having assumed an obligation he permits nothing to interfere with the discharge of the duties that have been imposed upon him. The members



EMMETT PIPKIN NORTH, M.D.

ST. LOUIS

President, Missouri State Medical Association, 1925-1926

of our Association, therefore, are well convinced that under his presidency the affairs of the Association will receive his constant and earnest attention and that he will apply his energies toward the advancement of the influence of the profession in all matters pertaining to the health and welfare of the people and the protection of the rights and privileges of the reputable medical profession.

HISTORY IN THE DIAGNOSIS OF PULMONARY TUBERCULOSIS

Possibly, in a few other diseases is the taking of an adequate history so important as in a case of suspected tuberculosis. This is all too seldom appreciated by the average physician, who is apt to judge the case by present symptoms only and not inquire duly into the past history of the case. Yet, painstaking and tactful questioning will frequently throw a flood of light on cases with few or none of the characteristic symptoms. That this takes time, no one will deny; yet, the time thus spent will often be as illuminating (at times more so) as the laboratory tests on which too many physicians are prone to rely alone for diagnosis.

Not all histories can be taken in an orderly manner, since each patient is an individual equation and must be treated as such; but questions regarding the following facts and symptoms should be asked in all suspected cases of tuberculosis:

1. *Cough*: (The symptom that most frequently drives patients to seek medical advice.)
a. Dry or productive. b. Mild or otherwise. c. Duration.

2. *Sputum*: a. Amount. b. Mucoid, mucopurulent, etc. c. Blood streaked. (This needs special emphasis.) d. Malodorous or not.

3. *Hemoptysis*: A most important symptom if present; though not pathognomonic should be considered tuberculous until proven otherwise. a. Frequency. b. Last occurrence. c. Amount, whether limited to streaks or small clots, or whether there has been actual hemorrhage.

4. *Fever*: There is no characteristic type of fever; the slight afternoon rise is most frequently noted. Some cases are considered afebrile. This is usually due to faulty temperature taking, since it has been shown that it takes six to twelve minutes to accurately record temperature rise. With fever, usually its concomitant symptoms of chills or chilly feelings, headache, backache, anorexia and tachycardia are ushered in. Any one of these symptoms, or all, may be present.

5. *Night Sweats*: These may be mild and of local character, limited to head, neck or

chest, or so profuse and general as to exhaust the patient.

6. *General*: Tired feeling, loss of weight, appetite, condition of bowels, especially as to diarrhea, menstruation, fistulo in ano and hoarseness.

Next in order comes past illnesses. Special inquiry should be made as to attacks of influenza, pneumonia, bronchitis, frequent winter colds, infectious diseases, and, last but not least, pleurisy—whether dry or with effusion, the latter being considered practically pathognomonic in these cases.

Family history of tuberculosis; if so, at what age did exposure occur.

Contact, whether in family or otherwise.

Social History of adults: 1. Marital. 2. Venereal disease. 3. Employment, past and present. 4. Habits.

A history thus taken will give one a comprehensive view of the case; enable one to correlate symptoms, and thus make the physical examination with greater assurance and accuracy for diagnosis.

ZINC STEARATE DUSTING POWDERS FOR INFANTS

The second report of the Committee on Accidents from Zinc Stearate Dusting Powders appointed by the Board of Trustees of the American Medical Association has recently been published. Copies of this report, with an appendix showing the opinions of thirty-four representative pediatricians on the therapeutic value of such powders, can be obtained on request. Address, Committee on Zinc Stearate Dusting Powders, American Medical Association, 535 North Dearborn Street, Chicago, Illinois, enclosing a self-addressed, stamped envelope.

There were reported to the Committee 131 accidents from the inspiration of zinc stearate dusting powders by infants. Twenty-eight of the victims died. The Committee conferred with representatives of certain distributors concerning the dangers incident to the use of such powders on infants. Following a meeting held at the headquarters of the American Medical Association, these distributors agreed to cooperate by adopting self-closing containers for the powders they distribute and agreed that cautionary labels are desirable. Opinions were secured from thirty-four representative pediatricians concerning the therapeutic value of zinc stearate dusting powders. Thirty-one believe that such powders have no advantage over other dusting powders, that they constitute a hazard to infant life, and that their use should be discouraged.

NEWS NOTES

The honorary degree of D.Sc., was conferred upon Dr. Willard Bartlett, St. Louis, by his alma mater, the Illinois College, June 10.

Dr. John R. Caulk, St. Louis, was elected president of the American Urological Association at the meeting held in St. Louis, May 21-23.

Dr. D. D. Cox, of Pomona, is taking post-graduate work on surgery at Chicago. He will spend about six weeks in the surgical clinics of that city.

Dr. Otto M. Koenig, St. Louis, has sailed for Europe and expects to remain until September, 1926, studying in the clinics in Vienna and other European medical centers.

Dr. Joseph S. Lichtenberg, Kansas City, sailed for Europe on June 20 for a tour of England, Scotland and other medical centers. He will attend the sessions of the English speaking Ophthalmological Societies of the World to be held in London, July 13-18.

Dr. George B. Tuttle, of Waimea, Kauai, Hawaii, desires a locum tenens about August 1. Dr. Tuttle will furnish an automobile, a furnished house, and guarantee an income of \$260 per month although he says a good man ought to make from \$400 to \$500 per month. A license to practice in Hawaii is necessary.

Governor Baker has reappointed Dr. Cortez F. Enloe, Jefferson City, Director of the Board of Penal Institutions, for a term ending June 19, 1929. The Governor has also appointed Mr. Wm. F. Robinson, La Plata, a member of the State Eleemosynary Board to fill the vacancy caused by the resignation of Mr. Charles F. Rendlen, Hannibal.

Dr. Cyril P. Vores, Unionville, recently opened an eight-bed hospital at Unionville with Miss Coleman as superintendent. The building is new and contains fifteen rooms. Efforts to establish a county hospital in Putnam county have thus far failed and if they are not successful soon Dr. Vores plans to increase the capacity of his hospital.

By reason of the shortage of funds available for the maintenance of the State University during the current biennial period it has been found necessary to discontinue the Public Health Laboratory service, effective July 1, 1925. The Missouri State Board of

Health maintains at Jefferson City a laboratory to which material formerly sent to the Public Health Laboratory should be forwarded for examination and report after July 1, 1925.

Dr. T. A. Kyner, Kansas City, has been appointed Superintendent of the General Hospital in that city to succeed Dr. John M. Frankenburg who resigned July 1. The Hospital and Health Board directed that a letter commending Dr. Frankenburg for his administration be sent to him on his retirement from the office. "His departure from the superintendency of the hospital will be a great loss to Kansas City," Mr. Gus Schmierer, president of the board said. "The cooperation he has been able to obtain from physicians and citizens here has been extraordinary." The board expressed confidence, however, that Dr. Kyner would be able to step in and make a success of the position.

Dr. W. W. Graves, St. Louis, who for a number of years occupied the position of Chairman of the Department of Neurology in the St. Louis University Medical School, has been appointed Director of the department. Other changes in the faculty of the school were announced as follows: Dr. Louis Rassieur and Dr. Max Myer have been advanced from the rank of Associate Professors of Surgery to Professors of Surgery. Dr. C. F. Sherwon was advanced from the rank of Instructor in Surgery to Assistant Professor of Surgery. Dr. H. D. Lamb was advanced from the rank of Instructor in Ophthalmology to Assistant Professor of Ophthalmology.

J. J. Pos, a chiropractor, of Higbee, Randolph County, was found guilty of the charge of practicing medicine without a license by a jury of the Circuit Court at Moberly, June 12, and fined \$50. Pos' attorneys, former state representative Oak Hunter and Mr. Chanier, used every argument common with the supporters of the chiropractic cult in their effort to have their client discharged. Not satisfied with attempting to prove that the Missouri State Medical Association was responsible for preventing the chiropractors from being licensed to practice, they accused the state board of health and the Rockefeller Foundation of being opposed to the licensing of chiropractors, according to the newspaper account of the trial. The court refused to permit any such testimony to be introduced and held the attorneys strictly to the evidence as to whether or not Pos had practiced medicine. The prosecuting attorney, Mr. Stringer, very

successfully held the witnesses to the main point at issue, namely, that Pos was practicing medicine and that he did not have a license from the state board of health authorizing him to do so. The jury deliberated on the case for about twenty-four hours and after several instructions from the court, brought in the verdict.

Dr. I. E. Ruhl, of Kansas City, Mo., a member of the Jackson County Medical Society, took the course of instruction at the School of Aviation Medicine at Mitchel Field, L. I., New York, May 1 to June 15, and qualified to perform the physical examination for flying. Dr. Ruhl, who is a Major in the Medical Reserve Corps, is one of nine members of the class who were so qualified. Professor Charles W. Greene, Columbia, Major in the Sanitary Reserve Corps, took two weeks training in the progress of physiology aviation. The Surgeon General of the army announced that this course of instruction at the School of Aviation Medicine was offered to the officers of the National Guard and Reserve Officers of the Medical Corps, and that the class is the largest which has ever passed through the school.

The course of instruction which they had was entirely professional and consisted of lectures, practical work at the school and clinics in New York City. The subjects taken up in the preliminary course were ophthalmology and otology, cardiology, and neuro-psychiatry. In the advanced course the same subjects were taken up plus physiology, psychology and administration.

On June 11, the class gave a dinner for the faculty. Besides the faculty and class there were present Lt. Col. Wm. R. Davis, M.C., the Chief, Medical Section, Air Service, and Maj. H. P. Carter, M.C., of the School Section, Surgeon General's Office. At the dinner the class gave their impressions of the school and the faculty spoke on the course from the standpoint of the instructor. Colonel Davis and Major Carter emphasized the importance of the work and the necessity of training a large number of reserve and National Guard officers for duty with the Air Service.

During the Atlantic City Session of the American Medical Association there arrived on the scene one Leonard L. Landis, of New York, who, it was reported, is "Chairman" of the "American Association of Independent Physicians." Landis is the individual who is at present conducting a medical institute in New York City under the euphemistic title, "House of Health." The New York papers

at different times have recorded Landis' arrest both by federal and by local authorities in connection with unsavory medical activities. Apparently, after looking about hither and thither, Landis issued a statement to the press informing the public that he was departing from Atlantic City with some of his colleagues thoroughly disgusted with the indifference of the American Medical Association toward questions of vital importance. He announced his extreme displeasure with medical ethics and condemned all serums and vaccines, including smallpox vaccination. Unfortunately for Landis, his press communications came into the hands of intelligent representatives of the press, including men sent to Atlantic City by the *New York Times*, the *New York World*, the *New York Herald-Tribune*, the *Philadelphia Inquirer*, the Associated Press, the Standard News Service, Science Service and local newspapers. Not one of these men sent the statement to his newspaper; instead, every one of them communicated with an official of the American Medical Association, inquiring as to the authenticity of the statement and as to the reliability of Dr. Landis. The result was that the official statement of this renegade physician appeared only in a periodical published in New York City, owned and edited by Mr. Bernarr Macfadden, sometimes called the "bare torso king." The incident is cited merely as another evidence of the high repute in which scientific medicine is held by the American press at this time. It is a position won by a wide-open policy of education of the public. For many years it has been the principle of the American Medical Association that what benefits the public benefits the physician and that the interest of the public is invariably first.—*Jour. A. M. A.*

PULMONARY COMPLICATIONS AFTER LAPAROTOMIES

ANATOLE KOLOBNY, Iowa City (*Journal A. M. A.*, March 14, 1925), points out that acute pulmonary complications after laparotomies are still encountered frequently. The clinical incidence of postoperative pneumonia is far greater after a laparotomy through the upper abdominal wall than after laparotomies when the incision has passed through the lower abdomen only. Pain in the operative wound during the first days after the operation forces the patient on whom a laparotomy through the upper abdomen was done to abandon the abdominal type of respiration. Hypodermoclysis under the pectoral muscles in such patients, with a trauma to the thorax wall sufficient to prevent an adequate deep thoracic respiration results in an increase in frequency of the respiratory excursions, with a secondary rise in frequency of the pulse. To avoid this deleterious reaction of the hypodermoclysis in patients after laparotomy, infusion should be made in the outer aspects of the thighs.

OBITUARY

J. FRANKLIN WELCH, M.D.

When on April 23, 1925, our beloved Treasurer, Dr. J. Franklin Welch, folded his hands for the last time in this life and answered the summons of the Supreme Being to enter the eternal life and receive his reward, the members of our Association and the host of people whom he had served during his long life bowed their heads in grief and sorrow that one who had radiated so much joy and happiness should pass from among us. With that feeling of loss of one we loved however mingled a sentiment of assurance that his memory would live long while he was enjoying the reward that he had laid up for himself in mansions "where moth nor rust doth not corrupt and where thieves do not break through nor steal."

At the Annual Meeting of our Association which convened at Kansas City, May 4, just ten days after the death of Dr. Welch, the House of Delegates set aside an hour for memorial addresses upon his life and character. These addresses will be found on another page of this issue.*

In the *Salisbury Press-Spectator* for Friday, April 25, appeared an article which describes so accurately and intimately the character and beautiful life of this much beloved man that we have taken the liberty of reproducing it to be included in the archives of our Association. The article follows:

"Dr. J. Franklin Welch, in point of service, the dean of the Chariton County medical fraternity, died at his home in this city at 2:30 o'clock, Thursday morning, at the age of 68 years, 5 months and 5 days.

He had been ill since last January, and while at times he seemed to gain strength, his decline has been steady. About two weeks ago he was taken to the Mayo Hospital at Rochester, but remained only a few days. The first few days after his return he seemed to improve, but a little over a week ago his strength began to ebb, and he declined rapidly. His condition grew alarming last Saturday and his daughter, Mrs. J. A. Brittenham, of Oklahoma City, was sent for. He lapsed into unconsciousness Monday and never rallied.

Death was due to an acute exacerbation of a chronic endocarditis.

Funeral services will be held Saturday afternoon at 1 o'clock at the Christian Church conducted by Rev. G. D. Edwards, of Columbia. The body will be taken to Paris for burial. If the roads permit the trip will be made in cars, if not, they will go on the train at 8 o'clock that evening.

*See page 273.

The widow and one son, McNutt Welch, of west of town, and a daughter, Mrs. J. A. Brittenham, of Oklahoma City, Okla., survive him.

Dr. J. Franklin Welch, was born in Monroe County, Missouri, November 18, 1856. His father was a Virginian and a school teacher. He gave his son the best educational advantages offered by the school districts of the county, which was later supplemented by a thorough English course in the Kirksville Normal school. At the conclusion of his work there he decided to enter a professional life and chose medicine, and in 1877 began the study of that branch with Dr. E. A. Gore, of Paris, Mo., as his preceptor. In 1878 he entered the Missouri Medical College at St. Louis, from which he graduated with high honors in 1880. Soon after his graduation he came to Salisbury and began practice, and with the exception of six years, 1884 to 1890, during which time he practiced at Stoutsville, Monroe County, he continued his practice here, and during all these years held the leadership in his profession.

He was always vigilant and alert and kept abreast of the times. In 1892 he attended the New York Post Graduate School of Medicine, and in 1896, he spent a summer in Europe visiting the best schools and hospitals in the cities of London, Berlin, Vienna and Paris.

On April 13, 1881, Dr. Welch was united in marriage to Miss Lucy V. McNutt, of Paris, Mo. A son and a daughter blessed this union.

Dr. Welch was an honored member of the principal medical associations of the country, and President of the Missouri Medical Association during 1916-1917. He served as Treasurer of the Missouri State Medical Association for twenty-six years continually, excepting one year, during which he served as President of the Association, and in all these years never missed a single meeting of the Association. In this position he gained a state wide acquaintance, and has hundreds of friends in all parts of the state.

He was a Fellow of American Medical Association and was active and prominent in the county and district associations, holding various offices.

He served on the medical advisory board of Chariton County and was also a member of Volunteer Medical Service Corps during the World War.

He was also prominent in lodge work being a member of the various Masonic bodies and a 32 degree Mason. In earlier years he took an active part in the local orders filling the various offices. He also held membership and various official positions in the I. O. O. F. order.

For many years he was one of the leading



J. FRANKLIN WELCH, M.D.
NOVEMBER 18, 1856—APRIL 23, 1925

members of the Christian Church, and it is largely through his foresight, judgment and generosity, as well as his unstinted service, that the local church has made the splendid progress it has. He was earnest and conscientious in his christian work, and the service he rendered should be an inspiration to all.

And, Dr. Welch is dead. Yes, a doctor of deep sympathy, a man who knew the hardships of practice in the early days, has laid aside the cares and anxieties of his patients which often burdened him. His was not merely a professional practice, it was a ministry, a service, a sacrifice, for humanity. Of indomitable energy, he often went beyond his strength. But what matter self, when the distress of others called. Day or night, rain or shine, mud or snow, he was ready to go. Many there are today who will stand at his bier and weep. He was there when they were born, and was there again when their children were born. Then, too, he was at the bedside, anxiously, tenderly, sympathetically, doing the last service as near and dear ones started their journey for the great beyond.

What a heritage, what an inspiration such a life as his. He exemplified the Great Master's teachings by a life of service for mankind."

JOHN RANDOLPH HALL, M.D.

Dr. John Randolph Hall was born in the historic old town of Arrow Rock, Saline County, Missouri, on August 28, 1849, and died of pernicious anemia at his home in Marshall, May 10, 1925.

For more than fifty years he was actively engaged in practice in this county, and probably no physician in a limited territory ever had a wider circle of friends and patrons nor was more highly esteemed than Dr. Hall. Endowed by nature with a genial disposition, democratic in spirit and broad and genuine in his sympathies, people were irresistibly drawn to him.

He was an untiring student of medicine, but did not confine his interests to that alone. A great reader of history, a lover of poetry, an admirer of art, an investigator of the progress of science, always informed as to current events, he acquired a wide range of information; and with a phenomenal memory, was a charming and instructive conversationalist. He loved good anecdotes and remembered and told them well, and by reason of this gift was able to give cheer and stimulate confidence in many a despondent mind.

For him the practice of medicine was a service of love—love for his fellowman. The thought of material remuneration entered in-

to his program of life less than any one whom the writer of this notice has ever known—probably too little—but it was the overflowing expression of his unselfish nature and could not be changed. Even after failing health had overtaken him and bodily weakness caused his step to grow slow, he would respond to the call of the poor and unfortunate—feeling that probably they could not procure from others the service they needed. Looking at his lifeless form, it might reverently be said to the many recipients of his kindly ministrations: "This is his body broken for you."

Honest himself and sincere he had no patience with sham or cant and was unsparing in his ridicule of such weaknesses in men. After more than thirty-six years of daily intimate association with him I would say that the watchwords of his life were honesty, sincerity, unselfishness and service. Possessing a commanding personality, with the highest standards of thinking and living, he might well be and was the model for many a young man.

Dr. Hall came of a family of physicians—his father, two brothers, an uncle, three nephews and two cousins being members of this profession; and his brother, the Hon. Matt W. Hall, though a layman, has the unique distinction of being the first layman elected an honorary member of the Missouri State Medical Association, a tribute accorded him in recognition of his services while a representative in the State legislature in behalf of organized medicine as author and sponsor of the first medical practice act worthy of the name to be placed on our statute books. Truly the Hall family is eminent in the medical history not only of this county but of the state as well.

In the religious, civic and social activities of the community Dr. Hall was always a willing and helpful participant, and his voice and influence were ever on the side of the higher and nobler things of life. He leaves a widow, whose father also was a doctor, a daughter and one son.

A wise, careful and competent physician, a good citizen and true man has gone to his reward, but his cherished memory and influence remain.

D. F. M.

THOMAS F. LOCKWOOD, M.D.

Dr. Thomas F. Lockwood, veteran physician of Butler, a graduate of Northwestern Medical College of St. Joseph, 1887, died in a hospital at Fort Scott, Kansas, May 15, 1925, following a minor operation. He was 60 years old.

News of Dr. Lockwood's passing came as a severe shock to his many friends. He had attended the Annual Meeting of the Missouri

State Medical Association at Kansas City and while there underwent a minor operation for the removal of a small tumor on his thigh and the day following was able to be up and about. While waiting for a train he suffered a severe chill and by the time he reached home he was already in the grip of a fever. Infection rapidly followed and would not yield to the efforts of physicians called to treat the doctor and it was decided to remove him to a hospital at Fort Scott but the trip in his weakened condition was too much and he passed on shortly after his arrival at the hospital.

Dr. Lockwood spent his childhood and early life in Missouri and Illinois and the public schools of those states furnished his elementary education. In 1895 he completed post graduate medical studies at the Nashville Medical College, Nashville, Tennessee (now University of Tennessee College of Medicine). He began practice at Conway, Missouri, in 1889, moving to Butler six years later. In 1888 he was united in marriage to Ellen J. Barr. To this union were born two children, Oscar, who died some time ago, and Mrs. Edna Ethel Crawford, of Nevada, Missouri.

Dr. Lockwood had been a member of Bates County Medical Society since 1902 and in 1924 served as president of that body and his devotion to the progress and welfare of the society was at all times marked. In 1911 he delivered the Oration on Medicine at the Annual Meeting of the State Association at Joplin. His life was dedicated to the teachings of the Master, his family and his profession. His jovial disposition and ready response to the appeals of his suffering fellowmen had won him a niche in the hearts of all who knew him and his death marks the passing of another of our well beloved, old time, country doctors.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL,
FOR 1925

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID THE STATE ASSESSMENT FOR ALL
THEIR MEMBERS)

- Benton County Medical Society, October 10, 1924.
- Chariton County Medical Society, December 20, 1924.
- Camden County Medical Society, December 29, 1924.
- Madison County Medical Society, January 21, 1925.
- Montgomery County Medical Society, January 22, 1925.
- Clark County Medical Society, January 30, 1925.

- Cape Girardeau County Medical Society, February 10, 1925.
- Dent County Medical Society, February 19, 1925.
- Webster County Medical Society, February 26, 1925.
- Ste. Genevieve County Medical Society, March 24, 1925.
- Ralls County Medical Society, April 2, 1925.
- Caldwell County Medical Society, April 4, 1925.
- Taney County Medical Society, April 6, 1925.
- Christian County Medical Society, April 15, 1925.
- Monroe County Medical Society, April 20, 1925.
- Cooper County Medical Society, April 28, 1925.
- Laclede County Medical Society, May 29, 1925.
- Scott County Medical Society, June 20, 1925.

STATE MEDICAL ASSOCIATION

Sixty-Eighth Annual Meeting, Kansas City,
May 4, 5, 6, 7, 1925

MINUTES OF THE HOUSE OF DELEGATES

Grill Room, Baltimore Hotel,

Monday, May 4, 1925—Morning Session

The House of Delegates of the Sixty-Eighth Annual Meeting of the Missouri State Medical Association was called to order by the President, Dr. W. A. Clark, Jefferson City, at 9:35 a. m., Monday, May 4, in the Grill Room of the Baltimore Hotel, Kansas City.

At roll call seventy-one delegates responded as follows:

DELEGATES

COUNTY	DELEGATE
Adair.....	J. S. Gashwiler, Novinger
Atchison.....	C. E. Benham, Tarkio
Andrain.....	H. C. Brashear, Mexico
Benton.....	E. L. Rhodes, Lincoln
Boone.....	Guy L. Noyes, Columbia
Buchanan.....	H. W. Carle, St. Joseph
Buchanan.....	C. H. Wallace, St. Joseph
Butler.....	A. R. Rowe, Poplar Bluff
Callaway.....	J. B. McCubbin, Fulton
Cape Girardeau..	B. W. Hays, Jackson
Carroll.....	O. R. Edmonds, Tina
Carter-Shannon..	W. T. Eudy, Eminence
Cass.....	T. W. Adair, Archie
Chariton.....	R. M. Fellows, Salisbury
Clay.....	J. H. Rothwell, Liberty
Clinton.....	C. H. Risley, Cameron
Cole.....	F. W. Gillham, Jefferson City
Cooper.....	C. H. Van Ravenswaay, Boonville
DeKalb.....	H. P. Yeater, Maysville
Dunklin.....	C. W. Brown, Campbell
Gasconade-Maries	
Osage.....	M. E. Spurgeon, Red Bird
Gentry.....	W. T. Martin, Albany
Greene.....	J. W. Love, Springfield
Grundy.....	W. H. Winningham, Trenton
Jackson.....	John Aull, Kansas City
Jackson.....	N. P. Wood, Independence
Jackson.....	J. R. McVay, Kansas City
Jackson.....	Frank I. Ridge, Kansas City
Jackson.....	G. Wilse Robinson, Kansas City
Jackson.....	H. L. Jones, Kansas City
Jackson.....	Sam Roberts, Kansas City
Jackson.....	R. W. Holbrook, Kansas City
Jackson.....	E. F. DeVilbiss, Kansas City
Jasper.....	R. M. Stormont, Carthage

Jefferson..... N. W. Jarvis, Festus
 Johnson..... E. Y. Pare, Leeton
 Lafayette..... E. M. Moore, Corder
 Lawrence-Stone... W. N. Deatherage, Galena
 Macon..... W. A. Welch, Macon
 Pettis..... A. J. Campbell, Sedalia
 Phelps..... W. H. Breuer, St. James
 Platte..... E. R. Hull, Camden Point
 Randolph..... D. A. Barnhart, Huntsville
 Ray..... R. L. Hamilton, Richmond
 St. Charles..... A. P. E. Schulz, St. Charles
 St. Louis City.... Roland Hill, St. Louis
 St. Louis City.... H. S. McKay, St. Louis
 St. Louis City.... C. L. Klenk, St. Louis
 St. Louis City.... P. C. Schnobelen, St. Louis
 St. Louis City.... R. L. Thompson, St. Louis
 St. Louis City.... F. J. Tainter, St. Louis
 St. Louis City.... Jno. W. Stewart, St. Louis
 St. Louis City.... C. F. Pfingsten, St. Louis
 St. Louis City.... W. P. Elmer, St. Louis
 St. Louis City.... C. H. Nielson, St. Louis
 St. Louis City.... Fred W. Bailey, St. Louis
 St. Louis City.... Hillel Unterberg, St. Louis
 St. Louis City.... W. H. Vogt, St. Louis
 St. Louis City.... H. McClure Young, St. Louis
 St. Louis City.... R. A. Woolsey, St. Louis
 St. Louis City.... John C. Morfit, St. Louis
 St. Louis City.... Chas. E. Hyndman, St. Louis
 St. Louis County.. John H. Armstrong, Kirkwood
 Saline..... F. A. Howard, Slater
 Schuyler..... O. P. Farrington, Greentop
 Scott..... G. S. Cannon, Fornfelt
 Taney..... Guy B. Mitchell, Branson
 Texas..... Leslie Randall, Licking
 Vernon..... J. T. Hornback, Nevada
 Wright-Douglas... E. C. Wittwer, Mountain Grove

Dr. W. H. Breuer, St. James, moved that the reading of the minutes of the Sixty-Seventh Annual Meeting be dispensed with and that they be adopted as published in *THE JOURNAL*. Seconded and carried.

The President, Dr. W. A. Clark, Jefferson City, read his message and recommendations as follows:

President's Message and Recommendations

It is a characteristic of every age so far as I know to see grave dangers threatening and to decry against existing conditions. I would not be an alarmist, but it does seem that the present trend of affairs portends trouble to scientific medicine unless we who are engaged in such work make a more vigorous appeal than we are at present doing in Missouri.

Many of the more progressive societies in our sister states have apparently sensed this fact and are carrying on a much more vigorous campaign than we, in order to educate the people and to set out in detail the work of organized medicine. It is well known to all of you that the Missouri State Medical Association has only been financially able to meet the absolute needs from day to day with nothing left to carry on any educational work. Many of the state societies are engaged in campaigns of enlightenment, sending out lecturers and teachers to the less well organized and intelligent, to speak on matters pertaining to medical education and paying the expenses of these men while thus engaged. So far as I can ascertain the results have been gratifying.

The forces arrayed against scientific medicine find it exceedingly profitable to carry on such work and do not hesitate to contribute freely to the expense. Because the reasonableness of our own position appeals so strongly to us we must not conclude that

it will necessarily do so to the public, unless the facts are presented to them in a manner sufficiently clear and forcible to overcome those of the ones who present the other side in their garbled and often untrue propaganda.

I do not know of but one state society located in a state that classes with Missouri in wealth and intelligence that is attempting to get along on the five dollar per year for dues. The state I refer to is Illinois, and it now has up a proposition to raise the dues to ten dollars per year and freely admits that it can not exist longer on the five dollar basis. Texas collects \$15.00; Ohio, \$10.00; Michigan, \$10.00; Indiana, \$10.00; New York, \$10.00.

The Missouri Bar Association, that has no such cause to expend funds as we, collects five dollars from its members. The plan of voluntary subscription was tried last year with very indifferent success. I, therefore, recommend that the dues of the Missouri State Medical Association be raised to ten dollars per year.

In the days before 1914 the salary paid our Secretary-Editor would probably have been adequate and he would have been able to live in the city and maintain a family with not only the necessities but some of the luxuries of life, but prices have gone up to such an extent that to do so now is an impossibility as you all know. A salary of \$350 per month now can not possibly furnish more than the bare necessities and is not in any way commensurate with that of other men doing the same class of work. I therefore recommend that the salary of our Secretary-Editor be raised to \$500 per month.

In addition to what the Secretary will have to say about the activities of our very efficient State Board of Health, and he speaks more authoritatively than I, because he attended the meetings, I wish to recommend that the House of Delegates express its appreciation for the fearless manner in which the board has attacked the diploma mill scandals.

Our new Secretary of the State Board of Health, Dr. James Stewart, who has already given much evidence of being a real and efficient secretary, is actively engaged in an effort to have Missouri put back on the National Birth Registration Area. That Missouri is not included in such area is a reason for real regret and humiliation and I recommend that this body extend to him every aid and support possible in this work.

Dr. C. E. Hyndman, St. Louis, moved that the President's message be referred to the Council. Seconded and carried.

The Secretary, Dr. E. J. Goodwin, St. Louis, read the Secretary's report. (See page 286.)

Dr. F. W. Bailey, St. Louis, moved that the report be referred to the Council. Seconded and carried.

THE PRESIDENT, DR. CLARK: I should like to call attention to the fact that the Secretary recommended some provision be made by which the councilors should meet once a year. There are a good many here who attended a councilor meeting in Jefferson City last year. That meeting, it seems to me, was productive of more good than anything I have seen in the way of medical effort for some time. I hope you will make some provision by which such a meeting might be made permanent.

The Treasurer, Dr. G. W. Hawkins, Salisbury, read the Treasurer's report. (See page 286.)

Dr. W. H. Breuer, St. James, moved that the report be referred to the Council. Seconded and carried.

Report of the Committee on Scientific Work

The chairman of the committee, Dr. E. J. Goodwin, St. Louis, read the report of the Committee on Scientific Work as follows:

The report is incorporated in the program as printed. We call attention again to the fact that it is exceedingly difficult to obtain contributions to the program from the smaller societies. We believe this is largely due to the fact that the county societies must struggle along without State Association assistance. Every now and then a member from the smaller communities has a paper he thinks he would like to read. We urge him to do so. But through diffidence or inability to prepare himself for the occasion, it is hard to get him to do it. There are many papers that could be read with benefit to the reader and our members, and it would give a larger contribution to our JOURNAL.

The guests of the Association will be Drs. Morris Fishbein, Chicago, Editor of the *Journal of the American Medical Association*, and John M. Dodson, Chicago, Secretary of the Bureau on Health and Public Instruction of the American Medical Association.

FRANK I. RIDGE,
EMMETT P. NORTH,
E. J. GOODWIN, Chairman.
Committee.

Dr. G. W. Hawkins, Salisbury, moved that the report be adopted. Seconded and carried.

Report of the Defense Committee

The chairman of the committee, Dr. Charles E. Hyndman, St. Louis, read the report of the Defense Committee as follows:

Cases pending May 6, 1924.....	21
New cases during year	10
Threats	1
Settled	11
Pending	19

Of the eleven cases settled, five were dismissed; two by plaintiffs; one account of malingering, one for lack of sufficient evidence and one was a threat which failed to develop into a suit. Four verdicts were rendered for the defendants and two for the plaintiffs. Of the four verdicts for the defendant one was granted on the defendant's agreement to send the plaintiff to Mayo Brothers for observation and treatment; one was granted on a second trial; one after a case had been pending for several years the first trial resulting in a hung jury and the second in a unanimous verdict for the defendant after jury was out only fifteen minutes. In another case the verdict was nine to three for the defendant. In the two cases of verdicts for the plaintiff one was a judgment of \$550, a previous trial having resulted in a verdict for \$2400 against the defendant; another case resulted in a verdict of \$10,000 against the defendant and his associate, \$5000 being assessed against each physician.

There are at this time nineteen cases pending. In three cases verdicts for the plaintiff were rendered, one for \$20,000, one for \$2500 and one for \$4500. Appeals have been taken in each of these cases.

The committee wishes to again impress upon our members the necessity of their cooperation in this work. Should a malpractice suit be threatened or filed against a member, a copy of the plaintiff's petition and your conduct of the case should immediately be sent to the committee. Progress of the suit and its termination should be reported to the committee promptly. It is absolutely necessary that

members be in good standing at the time suit is filed since the by-laws prohibit the committee from rendering financial assistance where dues are not paid up.

The committee wishes to take this occasion to thank those members who have assisted us in defending these cases.

CHAS. E. HYNDMAN, Chairman.
R. S. VITT,
ROBT. E. SCHLUETER,
Defense Committee.

Dr. Hyndman said in further report of the work of the Defense Committee:

This subject is getting to be a pretty serious one and the present disposition of juries is not only to render verdicts on slight and flimsy evidence but to increase the amount of the judgments until they are now giving \$10,000 and \$20,000 judgments without hesitation.

There are a good many factors that go to make up a malpractice suit. One of the things nearly always present is the fact that there is a doctor behind it. He may or may not have gotten into this position intentionally.

I should like to urge you to be especially careful about your conversation to patients you have received after other doctors have taken care of them. Some little remark of yours furnishes in their mind sufficient grounds for a suit, and the first thing you know you are lined up on the wrong side. Even though we have a personal feeling against a man, let us realize he has done the best he could. The fact that he has not been able to control the patient has resulted in the conditions we find. If you can not say something in protection of the doctor, do not say anything.

Another thing I should like to urge upon you, especially those in smaller communities who do not have access to X-ray apparatus. Juries seem to hold that if you have not taken an X-ray picture, or if the result does not look quite right, they will convict you. It frequently happens that you have difficulty in getting an X-ray picture of a fracture. Often the patient has not the money or the time or inclination. For your own protection, insist upon X-ray pictures being taken at the time. Get a print to keep in your own possession. I think 50 per cent. of our malpractice suits are due to fracture cases not resulting the way the patient or some doctor who has gotten into the case later thinks they should.

Another thing is the subject of insurance. I should like to urge on every man who has no malpractice insurance policy to protect himself, because he needs it. There are a number of companies, some that not only protect you and defend your case but pay the indemnity. There are others that only furnish protection. Every man should have the limit of liability protection. It does not cost much and saves a lot of worry. I do not think there is a man who is strong enough to stand up against a suit, even if his money is protected. Get liability protection.

Dr. F. W. Bailey, St. Louis, moved that the report be adopted. Seconded and carried.

Dr. G. Wilse Robinson, Kansas City, said it had been suggested that the question be asked how many members present carried indemnity insurance.

The President asked the question and about two-thirds of the members raised their hands.

There were no reports from the following committees: The Committee on Medical Education, the Committee on Hospitals, the Committee on Cancer,

the Committee on Vaccination, the Committee on Blindness.

Report of the Committee on Constitution and By-Laws

The Chairman, Dr. M. P. Overholser, Harrisonville, read the report of the Committee on Constitution and By-Laws as follows: An amendment to Article V of the Constitution was introduced at the Springfield Session in 1924 and is up for action at this Session. The amendment reads as follows: After the word "societies" in the fourth line, insert the following words: (2) in the absence of a delegate, the president of a component county medical society and, in the absence of the president, the secretary of a component county medical society; and. So that the Article when amended shall read as follows:

The House of Delegates shall be the legislative and business body of the Association and shall consist of (1) Delegates elected by the component societies; (2) in the absence of a delegate, the president of a component county medical society and, in the absence of the president, the secretary of a component county medical society; and (3) ex-officio, the officers of this Association as defined in this Constitution.

Dr. Overholser explained that the purpose of this amendment is to give a county society representation in the House of Delegates when the regularly elected delegate is not present, and the president or the secretary of the county society is present.

Dr. Breuer moved that the report be adopted. Seconded and carried.

Dr. Breuer moved that the amendment to Article V of the Constitution as read be adopted. Seconded and carried.

The Secretary announced the resignation of Dr. G. W. Hawkins, Salisbury, as Councilor of the 11th District.

On motion the resignation was accepted and the thanks of the Association tendered to Dr. Hawkins for his faithful service as Councilor.

The President instructed the Secretary to inform the Nominating Committee of this vacancy.

Communication From the American Medical Association

The Secretary read a letter from the American Medical Association relating to the reduction of federal taxes as follows:

Chicago, April 21, 1925,

Dr. E. J. Goodwin, Secretary,
Missouri State Medical Society,
St. Louis, Mo.

Dear Doctor Goodwin:

Published reports indicate that the President will submit to Congress in December next recommendations for reduction in federal taxes. Every effort should be made, therefore, NOW to induce him to recommend reduction in the tax burdens so long complained of by the medical profession, namely:

1. The war tax under the Harrison Narcotic Law.
2. The tax on traveling expenses necessary for attendance at meetings of medical societies.
3. The tax on the expenses of postgraduate study.

1. The war tax under the Harrison Narcotic Law. A tax under the Harrison Narcotic Law is necessary to enable the United States Government to retain jurisdiction over intrastate matters arising under it. The one-dollar tax originally imposed was ample for this purpose, the constitutionality of the law having been sustained by the United States Supreme Court while the one-dollar tax was in force. The three-dollar tax was first imposed by the Revenue Act of 1918, as a part of the general scheme to increase taxes to meet the expenses of the war. The other war taxes have been very generally abolished but the tax on the medical profession under the Harrison Narcotic Act remains. It is an unjust, iniquitous discrimination against the medical profession and should be removed.
2. The tax on traveling expenses necessary for attendance at meetings of medical societies. The Revenue Act of 1924, following the Revenue Act of 1921, authorizes

the deduction of all ordinary and necessary expenses paid or incurred in carrying on any trade or business, before the computation of federal income taxes. It specifically authorizes the deduction of traveling expenses incurred in the pursuit of a trade or business. The Commissioner of Internal Revenue, however, denies the right of the physician to make any such deduction in so far as relates to traveling expenses incurred in attending meetings of medical societies. The physician who attends a meeting of a medical society for the purpose of increasing his professional knowledge and skill is thus required by the Commissioner of Internal Revenue to pay a tax in order to avail himself of the opportunity to do so. This seems clearly contrary to public policy. It is not in keeping with the Commissioner's other interpretation of the law, which allows business men generally to deduct traveling expenses incurred in replenishing and enlarging their current business resources. It is nothing more nor less than a tax on the knowledge and skill necessary for the prevention of disease and the relief and cure of suffering, injuries and illness.

3. The tax on the expenses of postgraduate study. The Revenue Act of 1924 authorizes the deduction of all ordinary and necessary expenses paid or incurred in carrying on any business or trade, which covers all ordinary and necessary expenses of the practice of medicine. The Commissioner of Internal Revenue, however, has ruled that expenses of postgraduate study are not ordinary and necessary expenses incident to the practice of medicine, and are therefore not deductible. In effect, he requires the physician to pay a tax on the cost of postgraduate study and his professional success. The tax seems clearly contrary to public policy. It is not in harmony with the practice on the acquisition of knowledge and skill essential to allowed by law and recognized by the Commissioner under which manufacturers and merchants are allowed to deduct as expenses of carrying on their business the cost of replenishing and extending their current business resources.

It is urged that the Missouri State Medical Society adopt appropriate resolutions protesting against the taxes named above and that it instruct its officers to bring their protest and a prayer for relief to the attention of the President and Secretary of the Treasury, in order that the President may recommend to Congress appropriate relief.

Copies of any resolutions adopted should be sent to the President and Secretary of the Treasury, and to every senator and representative from your state. Please send a copy of any such resolution to this Bureau.

Yours truly,

WM. C. WOODWARD,
Executive Secretary, Bureau of Legal Medicine
and Legislation.

Dr. F. W. Bailey, St. Louis, moved that the Secretary be instructed to draft suitable resolutions and present to the House of Delegates at the Wednesday Session.

The Secretary suggested an amendment to the motion asking the President to appoint a special committee to study the letter and report to the House.

Dr. Bailey accepted the amendment and the motion as amended was duly seconded and carried.

The President appointed on the committee Drs. T. W. Cotton, Van Buren, W. H. Breuer, St. James, and E. J. Goodwin, St. Louis.

The Secretary read a communication from the American Peace Award as follows:

Dr. E. J. Goodwin, Secretary,
State Medical Association,
901 Missouri Theatre Building,
St. Louis, Missouri.

Dear Dr. Goodwin:

Our Committee will greatly appreciate it if you will place the following matter before your convention.

The World Court has been made the unfinished business of the Senate for December 17 next.

The question of our adherence to the Court on the Harding-Hughes-Coolidge terms has already been before the Senate for more than two years. If the discussion of the Court on December 17 is to result in an actual vote in the Senate upon it, we believe the people of the country will need to express emphatically their desire for speedy action. The Isle of Pines was the unfinished business of the Senate for twenty years.

Leaders of both the major parties have endorsed the Harding-Hughes form of the Court. President Coolidge has recommended our adherence to the Court on these terms in his message to Congress in each of the two years just past. The leading organizations of the country have endorsed the Court on these terms, including the American Bar Association, the Chamber of Commerce of the United States, the Federal Council of Churches of Christ in America, the League of Women Voters, the Grange, the General Federation of Women's Clubs and the American Federation of Labor.

Will the State Medical Association, in convention assembled, by suitable resolution express its emphatic desire for a record vote of the Senate on the Court on the Harding-Hughes terms as soon as practicable after the discussion of the Court begins on December 17 next? Will you further send a copy of this resolution to every United States Senator, and in particular to the members of the Foreign Relations Committee, a list of which you will find enclosed.

The World Court is not a political question nor should it be. The Court itself is a judicial and not a political institution. Your convention in taking the action above requested will simply be expressing its conviction that the United States should participate in the only existing mechanism for applying international law to the settlement of international disputes and the "outlawing war."

Will you be good enough to write us whether the question is brought before your convention and what action is taken?

Sincerely Yours,

ESTHER EVERETT LAPE,
Member-in-charge.

Dr. Hillel Unterberg, St. Louis, moved that the communication be laid on the table. Seconded and carried.

Dr. John C. Morfit, St. Louis, asked how many of the committees that appeared in the program from which no reports had been received are standing committees created by the By-Laws and how many are special committees.

The Secretary informed the House that the standing committees are: The Committee on Medical Education, the Committee on Cancer, the Committee on Vaccination, the Committee on Health and Public Instruction. The special committees are: The Committee on Hospitals, the Committee on Blindness.

Dr. Morfit moved that the committee just appointed by the President to report on the communication from the American Medical Association be instructed also to consider the advisability of abolishing the committees from which no reports had been received and the reason for whose existence does not appear useful at this time. The motion was seconded and carried.

Report of the Committee on Health and Public Instruction

The Chairman, Dr. Herman E. Pearse, Kansas City, having arrived at this time, the Chair called upon Dr. Pearse for the report of his committee. Dr. Pearse read the report. (See page 287.)

Dr. J. S. Gashwiler, Novinger, moved that the report be adopted. Seconded.

Discussion by Dr. L. C. Chenoweth, Joplin. After the discussion the motion to adopt carried.

The Chair appointed the following Committee on Nominations:

G. Wilse Robinson, Kansas City; C. T. Ryland, Lexington; A. J. Campbell, Sedalia; D. A. Barnhart, Huntsville; H. S. McKay, St. Louis; R. L. Hamilton, Richmond; H. S. Conrad, St. Joseph; Geo. M. Bristow, Princeton; G. S. Cannon, Fornielt; T. B. M. Craig, Nevada.

Dr. Hillel Unterberg, St. Louis, moved that the regular order of business be suspended and the selection of the next place of meeting be taken up at this time. Seconded and carried.

Dr. Wm. H. Vogt, St. Louis: The matter of medical meetings throughout the state is one I think that is changing steadily year by year. I believe we are all taking the stand today that our medical meetings are of much more interest if the program can be supplied in a manner other than the mere reading of papers. It therefore seems there has been a greater interest in the holding of clinics at these various meetings—that the men are more interested in clinical meetings than in listening to papers, because the papers are all published in *THE JOURNAL*

and can be read at one's leisure, while the clinics can usually only be held in some of the larger communities where material is greater, and men are attracted to the clinical material. Not only does it give a little visit to the larger communities, but it also gives a man an opportunity to see clinical material which he has been wanting to do for some time, but because of lack of opportunity has not been able to do.

I therefore should like to bring before you gentlemen the proposition and ask that this Association consider its next meeting at St. Louis. (Applause.) At a meeting of the Board of Directors of the St. Louis Clinics, which is made up of something like one hundred and thirty members of the profession of St. Louis who are interested in the various branches of surgery and medicine and their various specialties, they promised extensive clinics if such meeting were held in St. Louis, and the following motion was adopted: "The Board of Directors of the St. Louis Clinics urges the Missouri State Medical Association to hold its next annual meeting in St. Louis and assures the Association that the St. Louis Clinics would consider it a privilege to arrange clinical programs to meet the needs of the members."

The matter was then presented to the St. Louis Medical Society, and I am here today to extend to you from that Society, from the various special societies in St. Louis, as well as from the Chamber of Commerce, the St. Louis Bureau of Publicity, from the Mayor, the Association of Retailers, and the Advertising Club of St. Louis, such invitation.

I therefore should like to beg the Association to consider this invitation seriously, because I am sure the medical profession of St. Louis will give them a clinic which will delight them, and that every one will go home pleased with such a meeting. (Applause.)

I shall leave the communications from the various societies and individuals which I have mentioned with the Secretary.

Dr. G. Wilse Robinson, Kansas City, moved that we accept the invitation to hold our next Annual Meeting in St. Louis. Seconded and carried.

On motion the House adjourned until 2 p. m.

Afternoon Session

The House of Delegates was called to order by the President, Dr. W. A. Clark, at 2:30 p. m., Monday, May 4, 1925, in the Grill Room of the Baltimore Hotel, Kansas City.

The report of the Committee on Arrangements postponed from the morning session was made by the Chairman, Dr. Frank I. Ridge, Kansas City. Dr. Ridge made some announcements in regard to the morning clinics, the President's reception on Wednesday evening and the Thursday evening smoker, with boxing and "less than one-half of one per cent." refreshments. Dr. Ridge also stated that the Ladies' Auxiliary had made arrangements to take care of the doctors' wives on that evening and provide a ride about the city on Thursday afternoon, with a tea following the ride.

Dr. G. Wilse Robinson, Kansas City, supplemented this report by announcing the arrangements for the golf tournament.

Report of the Council

The Chairman, Dr. A. R. McComas, Surgeon, read the report of the Council as follows:

The Executive Committee of the Council held four meetings during the year, and there was one general meeting of the Council and officers of the state and

county societies held in Jefferson City, January 15, 1925.

At the September meeting we received the resignation of Dr. R. E. Schlueter, Councilor of the 20th District and member of the Executive Committee. We regret very much that Dr. Schlueter found it necessary to resign from these positions as he has always been a faithful, earnest worker in the society.

The bid of Mr. Ovid Bell, Fulton, for printing THE JOURNAL for 1925, was accepted at a saving of \$100 per month.

A request from the Missouri Bar Association that we appoint representatives to attend the meeting of the Crimes Committee of the Missouri Bar Association held in Jefferson City, October 15, 1924, was read and Drs. E. P. North and E. J. Goodwin were appointed to represent the Association at this meeting.

At the meeting held on December 17, 1924, a letter from Dr. J. B. McCubbin, of Fulton, was read, suggesting that a meeting of all the Councilors and other executives of the Association be called for the purpose of discussing proposed amendments to the medical practice act. The Executive Committee had considered such a meeting many times heretofore but on account of lack of funds the meetings had not been held. This year they were enabled to hold such a meeting on account of voluntary contributions to the public health fund. Accordingly this meeting was called for January 15, 1925, at Jefferson City.

The President, Dr. Clark, appointed Dr. W. H. Vogt, St. Louis, to fill the term ad interim caused by the resignation of Dr. Schlueter as Councilor of the 20th District.

Dr. J. C. B. Davis, of Willow Springs, Councilor of the 27th District, asked authority for the county societies of Howell and Oregon to be consolidated and reorganized as the Howell-Oregon County Medical Society, which authority was granted.

There was also a request from Dr. T. B. M. Craig, of Nevada, Councilor of the 16th District, that Vernon and Cedar counties be authorized to reorganize as the Vernon-Cedar County Medical Society which authority was also granted.

At the meeting of the Executive Committee, February 12, 1925, the following statement was issued for publication in the newspapers:

"At a meeting of the officers of the Missouri State Medical Association held in Jefferson City, January 15, 1925, certain amendments to the medical practice law were approved for introduction in the General Assembly, to correct the defects in the present law. The public should be greatly interested in this matter since these amendments to the law concern the health and welfare of the people.

The present law is deficient and the Missouri State Board of Health has been acting under this law which accounts for much of the criticism of its acts. We have full confidence in the integrity of every member of the board of health and we endorse their action demanding a grand jury investigation at which time all the records of the board of health will be reviewed.

We earnestly solicit the endorsement and cooperation of the press and public in the enactment of these amendments."

This statement was given out just before citations were issued by the state board of health to some sixty physicians to appear and show cause why their licenses should not be revoked.

At the meeting of April 15, 1925, the Secretary reported the death of Dr. H. L. Reid, of Charleston, Councilor of the 22d District. The President then

appointed Dr. G. S. Cannon, Farnfeld, to act as Councilor until the Annual Meeting, which was approved by the Executive Committee.

The President, Dr. Clark, reported that the legislature had failed to appropriate \$15,000 for the physical education of students in the high schools and stated that Dr. Curtis, in charge of physical education for the department of education, was campaigning among civic organizations for voluntary contributions to make up a sufficient fund to carry on this physical education in high schools until the next session of the legislature and Dr. Curtis had requested our Association to contribute \$500 to this work. After discussion the Committee decided that this subject be brought to the attention of the House of Delegates at this meeting where we hope a full discussion of this question will be had.

On account of lack of funds the Committee was compelled to discontinue the services of our legislative agent, Mr. Wm. Condon. During the term of his employment his services were invaluable and we regret that the condition of our finances is such that we found it necessary to discontinue his employment.

The meeting of the Councilors with the Committee on Health and Public Instruction and the officers of the Association was productive of great good in that for once we were agreed upon the amendments to be introduced to the medical practice act. Heretofore, there has always been a difference of opinion but this time we were practically all agreed. As was stated above this meeting was made possible by the voluntary contributions to the public health fund. In contributing to this fund the names of many men stand out for their handsome contributions and the interest manifested. On the other hand many entire county societies contributed not one cent. This is a situation that demands earnest consideration. If we are to forge ahead and do the things that a society state-wide in its scope should do to hold its place among other organizations of like character we must necessarily have sufficient funds; therefore, the question arises shall we depend upon the generosity of a portion of our membership or shall we increase the dues to an amount sufficient to produce the revenue which we must have to carry on the work becoming to such an organization as ours, and keep pace with other state medical associations? With no more problems confronting them that we have the states of Indiana, Illinois, Ohio, Oregon, New York, Maine, Texas, Wisconsin, Michigan and California have found it necessary to increase their state dues to \$10 or more. If our state dues were increased to \$10 and the money wisely spent, we could not only help the county societies and individual members but we could enlighten the public on matters of health and preventive medicine.

On April 23, we received the sad news of the death of our once President and long time Treasurer, Dr. J. Franklin Welch, of Salisbury. It is the duty of the chairman of the Executive Committee to fill this vacancy and on account of the satisfactory arrangements Dr. Welch had with the Traders Bank of Salisbury, Dr. G. W. Hawkins, Salisbury, was appointed treasurer until the Annual Meeting.

The Council approved the report of the Executive Committee and adopted it as the report of the Council to the House of Delegates.

The Council recommends that \$100 be donated annually for two years to the physical education of high school pupils.

The Council recommends to the House of Delegates that the annual dues be increased from \$5 to \$10 per year. A. R. McCOMAS, Chairman.

Dr. J. S. Gashwiler, Novinger, moved that the report be adopted. The motion was duly seconded.

After some discussion on the question of increasing the amount of dues Dr. Breuer made the point of order that the adoption of the report of the Council did not carry an increase in dues but that an amendment to the By-Laws must be introduced for this purpose and when that was done opportunity would be given to discuss the question.

The Chair ruled that the point of order was well taken and put the motion to adopt the report. The motion carried and the report was adopted.

Dr. W. H. Breuer, St. James, moved that \$100 be donated annually for a period of two years to the physical education department of the department of education for the instruction of high school pupils in physical education. Seconded and carried.

Dr. M. P. Overholser, Harrisonville, introduced an amendment to the By-Laws as follows:

Amendment to the By-Laws

Amend Chapter IX, Section 1, by striking out the word "five" in the first line and inserting the word "ten," so that the first six lines of the Section shall read:

An assessment of ten dollars (\$10.00) per capita on the membership of the component societies is hereby made the annual dues of this Association, of which one dollar (\$1.00) shall be credited to subscription of THE JOURNAL for one year.

The President, Dr. Clark, announced that this amendment would lie over until the Wednesday meeting when it would come up for action.

The Secretary read a telegram from the Woman's Auxiliary thanking the members for their cooperation, which made it possible to organize sixty counties of the state in one year.

THE PRESIDENT: To organize that many counties in one year and have them functioning is doing pretty good work, I think; better work than we do.

DR. G. WILSE ROBINSON, Kansas City: I have a resolution sent in by Dr. Bliss, St. Louis, who was unable to be present.

Resolution on Political Exploitation of State Hospitals

WHEREAS, It has required many years of patient work to free, in part, the State Hospitals from the destructive effects of political influence in the appointment and removal of officers and employees of these institutions, and

WHEREAS, We believe that the people of Missouri favor a method of control which will bring the greatest benefit to the most unfortunate of all wards of the state, and

WHEREAS, Political consideration should not determine the appointment or discharge of persons whose duty it is to care and provide for the sick and afflicted; therefore, be it

Resolved, That it is the sense of the Missouri State Medical Association that the physicians of Missouri want the cleemosynary institutions kept entirely free from political exploitation.

Dr. Robinson stated that he had added the words "in part" in the second line and the word "entirely" in the last line because, he said, we know our State Hospitals are not entirely free from political influence. He said he had talked with Dr. Bliss about the matter a short time ago and that they did not entirely agree on the particular wording which he had added.

Dr. E. C. Wittwer, Mountain Grove, moved the adoption of the resolution as amended by Dr. Robinson. Seconded and carried.

In Remembrance of Dr. J. Franklin Welch

THE PRESIDENT: Recently we have had one of our old and respected members removed by death, a man who was with us a great many years, once the

President of the Association, and always an active worker. At this time I thought probably some of the members who had worked with Dr. Welch for years would like to say something about his life and character. Are there any of the members who would like to pay a tribute to him at this time?

DR. D. A. BARNHART, Huntsville: If I could express in words how deeply I feel and could transform my heart throbs into sentences, I might pay a tribute worthy the memory of Dr. Welch.

Dr. Welch was my friend and neighbor. I have known him for a number of years and knew his true worth. The longer I knew him the more intimate our friendship grew and I learned to love him more and more.

He was one of the most staunch and loyal friends our State Medical Association has ever had and has proven his loyalty by the work he has done for our Association.

He was a man of peculiarly strong personality that distinguished him among other men.

I believe he was known and loved by more men than any other doctor in our state unless it is our worthy Secretary.

His was a life of devotion and service to his people and to our State Association and we shall miss his genial companionship and valuable counsel.

He was a doctor of the old family type, because he loved his people and came in close relationship with them. He was not only their medical but their trouble doctor as well, and he shared equally in their joys, sorrows and afflictions.

I feel that this Association has lost one of the most valuable and beloved members it has ever had and I wish I could pay a tribute worthy of Dr. J. Franklin Welch.

DR. G. WILSE ROBINSON, Kansas City: I am sure every one present would like to speak in reference to Dr. Welch.

I am going to repeat about Dr. Welch what I said in a telegram to Mrs. Welch after I heard of his death. I wired that in the death of Dr. Welch Missouri has lost the best loved doctor in the state. I think that expresses the sentiment of all of us. Every one who knew him loved him.

I attended his funeral. The services were interrupted somewhat by the crying of a baby. Dr. Goodwin told me that some woman afterwards stated that if she could have expressed her opinion she would have said: "Cry on, little baby, because perhaps Dr. Welch brought you into the world"; and upon investigation this was found to be true.

He was a real family doctor and a true friend of man. A man of lovable character, a man who loved his fellowmen and in turn was loved by them.

DR. A. R. McCOMAS, Sturgeon: It has been my great privilege to know Dr. Welch ever since I began the practice of medicine. At the first medical meeting I ever attended, Dr. Welch was in some official position. He seemed to be from his general nature a self-appointed man, not only in that society but in the State Association, to see that the younger members were made acquainted and made to feel at home.

He had another element in his nature aside from being a doctor, as has been described by the other gentlemen. His loyalty was the strongest I ever knew. In numerous conversations with him about his early life and practice, he almost every time referred to his old preceptor, Dr. E. A. Gore, of Paris, with that love and affection a son remembers his father. Some of the older men will remember that in the days when Dr. Welch came up as a medical student the preceptor played no small part in the

final rounding out of the character of the man who studied medicine with him.

As a further evidence of this loyalty, although he had lived in Salisbury for perhaps thirty years, his desire was to be taken back to the place of his birth, Paris, Missouri, and be buried beside the body of his old-time friend, Dr. Gore.

It is hard to estimate the worth and character of a man of the type of Dr. Welch. He was endowed with a great deal of energy and a broad love for humankind. He had no frills nor foolish notions; he had no fads; but he was a plain, everyday citizen who loved his fellow-man.

DR. W. H. BREUER, St. James: Mr. President and Gentlemen: I feel that I should be derelict in my duty did I fail at this time to offer my tribute of respect to one whom I knew and loved so well. I do not think that there is any one in the medical profession of this state who was nearer to me and who did more for me as a young man starting out to practice medicine than did Dr. Welch.

As Dr. McComas has so ably said, Dr. Welch had a feeling about his preceptor, Dr. Gore, that clung to him through all the years of his life. In my earlier years of practice, Dr. Gore and my preceptor, Dr. S. H. Headlee, were classmates and graduates from the same school. He used to say to me: "Don't stray away from the teachings of the Old Man and the things he taught you that you do not learn out of any book."

I want to say to you men here today that Dr. Welch was a gentleman of the old school. He was one of the few old-time practitioners, the old family physician that is fast passing away. He was not only a real doctor, but he was a real man. There was no time in all my experience as a doctor and in my association with this great Medical Association of Missouri that I missed the face of Dr. Welch at these meetings. He was always ready with his help to pour oil upon the troubled waters. In the years that are passed and gone, those of us who have been in constant attendance at these meetings know there have been days when the waters were stormy and the waves rolled high and when it looked as though we were passing toward the shoals and rocks; but Dr. Welch was always ready in his nice, smooth, amiable way to pour oil on the troubled waters and pass this old Ship into its safe anchor. He did it not only by that broad, brilliant mind, but with that great heart that was filled with love for humankind.

I want to say to you, my friends, we will miss his counsel and many are the days to come when we will think and wonder, "What would Dr. Welch have said or done under similar circumstances?"

Let me say to you, my friends, that the sod rests lightly on no nobler man than Dr. J. Franklin Welch.

DR. M. P. OVERHOLSER, Harrisonville: In the roll call of the House of Delegates at this Annual Session the name of the faithful Treasurer of our State Association was not called. There would have been no answer to the name of Dr. Welch. His voice will no more be heard at these meetings of our State Association. The cordial greetings, bright smiles, cheerful countenance, kind disposition, and warm handshakes of this faithful member of our State Association will never again gladden the hearts of his many friends at these annual state gatherings; for Dr. Welch is no more. He is dead. This memorial session of the House of Delegates in honor of this faithful servant of our state organization is to extol his virtues and to say "Farewell!"

With what tenderness we should approach the consideration of his life and the emulation of his

virtues! Let the sandals be taken from our feet and the coverings from our heads as at this solemn service we mention the name of Dr. J. Franklin Welch.

His place in our midst, now vacant, covered, as it were, at this service with the emblems of death, reminds us more forcibly than words can tell that he is gone from us for all time.

When we come to consider the noble character of Dr. Welch, we may congratulate ourselves that our Association was blessed with the faithful service of such a man in the responsible position he has held for so many years—a man with such sterling traits of character, such unflinching integrity, and such determined, unswerving devotion to duty.

Today at this memorial service we remember with pride every honor he has gained, every gracious act he has performed, and every kind and helpful word he has spoken.

His faithful and valuable services to our Association and to mankind have been entered to his credit in life's great ledger; and when his good work was done we can be assured that he went forth to meet the shadowy future without a fear and with a manly heart.

Are we not born with a higher destiny than that of earth's life, and while we are here today at this hour to mourn the departure of a friend and faithful co-worker, may we not hope that the eye that shone so brightly, the voice that addressed us so kindly, and the hand that grasped ours so cordially will meet us again on the Other Side?

At the conclusion of these addresses, adjournment was taken in silence as a further tribute to the memory of Dr. Welch.

Wednesday, May 6, 1925

The third meeting of the House of Delegates was held on Wednesday morning, May 6, in the Francis I room of the Baltimore Hotel, and was called to order at 9:45 by President Clark.

The Secretary called the roll and sixty-one delegates responded.

The minutes of the Monday morning and afternoon sessions of the House of Delegates were read by the Secretary and there being no corrections President Clark declared them approved as read.

The next order of business was the election of the president for the ensuing year and President Clark called for nominations.

Election of President

DR. W. H. BREUER, St. James: Gentlemen of the Missouri State Medical Association: The time has come when we must again select one of our number to bear our colors and lead us through the devious paths and dark mists of the coming year. During the past years we have had many great leaders who have been presidents of the Missouri Medical Association. In looking over the list of names of those men who have been president of this Association, we find on that roster the names of some of the greatest medical men of the time—men whose names are written upon the brightest pages of medical history in this state.

We have passed through many stormy times and rough seas; but there has always been some outstanding character who was ready in the crisis to grasp the helm and steer this old Ship of State into the placid waters of the harbor.

If there ever was a time in the history of this Association when we need strong leadership, that time is now. If there ever was a time in the history

of this Association when we need wise counsel and strong conservatism in our leadership, that time is now. But I want to say to you that the men of this Missouri State Medical Association always measure up to that standard.

We know that men who are trained for a scientific purpose, men whose minds are led along the direction of one object—that of relieving suffering humanity—are not always trained in the ideals of leadership of men. But I want to say to you, my friends, this morning, that that condition does not exist in the Missouri State Medical Association today.

We know that in the past we have been called upon to pass through the reorganization of this Association, when the minds of the greatest brains in our Association differed very greatly upon the plan which should be adopted; but at that time we found one great leader stands out as a representative of all the great thought of the day, and he led us along through that reorganization to a safe mooring. We are standing as it were, today, upon the very precipice, with a maelstrom of quackery, charlatanism and selfishness beckoning us on, while suffering humanity and blind justice are crying out for us to turn upon the broad highway of sound, ethical, scientific medicine, and lend to them a helping hand.

Are we going to desert them in their hour of peril? Are we going to turn aside and pass the faithful trust that has been handed down to us by our forefathers? I say, "No! We are going to be equal to the emergency."

My friends, ever since the creation of man, God Almighty has always provided a leader for His children; and as Joshua was trained under Moses to carry on the work and lead the Children of Israel to the Promised Land after Moses should pass to his great reward, even now we have one among us who has been trained under the splendid leadership of one of the great characters of this Association to lead us on to our destiny.

A few years ago, down on a farm in a little home among the vine-clad hills of Franklin county, was born a son to gladden the heart of a loving mother. Little did she dream as she fondled his tousled head of the important part he was to play in the great work of the Medical Association of this state. Being trained under the leadership of such medical educators as Frank J. Lutz, W. G. Moore, W. B. Dorsett, and J. Friedman, he at once took his place among the young men of the profession, thus preparing himself for the future work he was destined to do.

Those of you who are familiar with the history of medical education in this state know that it was our fearless leader, Dr. F. J. Lutz, who was president of the Missouri Board of Health back in the nineties, who first threw down the gauntlet and raised the standard of the practice of medicine in this state. Every board of health from that time to the present has endeavored to keep up the good work which was started by him, with varying degrees of success and failure. But it remained for the present State Board of Health to reach the climax. The time came; the crisis arose. It devolved upon them either to clean house or to meet defeat and turn the state over to the charlatans and the quacks. Under the fearless leadership of the present president of the board, they chose the former course, with results with which you are familiar.

Gentlemen of this Association, I want to say to you that this great work was not carried on without much endeavor and great personal sacrifice on the part of every member of that board of health.

They became the target of every charlatan and irregular practitioner in this state; and not only in this state, but the influence of this gigantic octopus had spread out until his slimy tentacles ramified into almost every state in this Union.

Without detracting one single iota from any member of that board of health, for God knows they have all done their duty, and done it well, I want to say the brunt of this fell upon the president of the board. Private detectives were placed upon his trail. Every act of his whole life was watched. He was investigated from his birth down to the present time; but I am proud to say to you not a single stain was found upon his character, nor a single blot upon his public acts. When the time came for this board of health to do its duty and send out the summons to bring in the men and try them, they had so thoroughly prepared their case that those who were guilty were seeking cover in the low places.

Gentlemen, the time has come for us to pass out our reward. I desire to place in nomination for the next President of this Association Dr. Emmett P. North, of St. Louis. (Applause.) Dr. North is a man whose character and reputation as a citizen are above reproach. His ability as an executive and a leader is beyond comparison. I know him as a personal friend. I have attended school with him. I have walked with him through the paths of life. I have walked by his side. I know his very intimate self and I want to say to you, my friends, trained as he has been under the great minds of the medical men of this state, I know every act of his life is pure; every thought of his mind is for the benefit of this Association.

Now, my friends, you can do no better than elect Dr. North as President of this Association, and show to the charlatans and quacks that this Association stands behind him and approves the great work he has done for the benefit of suffering humanity in the State of Missouri.

DR. H. S. MCKAY, St. Louis: I want to second the nomination of Dr. North. In doing so, I wish to inform you that insofar as I know, Dr. North has been the only man from St. Louis to receive the unanimous support of the St. Louis delegation in several years, showing you how we in St. Louis feel about our own member. We know him intimately. I, like Dr. Breuer, who has just placed him in nomination, have known him for many years. I attended school with him; in fact, we roomed together, and that brings up a train of associations and memories most of which I should be proud to relate, but do not care to take your time.

As a matter of fact, I feel a good deal as did the darkey in an incident that occurred a good many years ago in St. Louis, where we were operating upon a negro surgeon at the old colored hospital. Administering the anesthetic to the colored surgeon was a black doctor of tremendous size. He was giving chloroform to this surgeon upon whom we were about to operate, but he could not get him anesthetized. The patient struggled and struggled and struggled. We were unable to keep the intestines back in the abdomen. It looked like we could not do any operation upon the man at all. Finally we looked down at the big colored anesthetist and said, "Can't you get this man under? We can't operate this way."

He attempted again, and again failed. Finally after swearing at him and trying to scare him to death, and by every other means, tears began to course down the old colored doctor's cheeks. He said, "Doctor, Ah kyant jes' pour de p'isin on him. He's de bes' frien' Ah's got!" (Laughter.)

I am very much in that situation. It would be impossible for me to do justice to my friend, Dr. North, in any attempt at making a speech in his behalf. It just can't be done by one who knows him so well. However, I can tell you a few things about his life I think should be one of the factors in your decision to make him President of this great Association.

Three outstanding factors come to my mind in connection with Dr. North through all this long acquaintanceship. One of them is energy. Everyone who knows him or knows anything about him is familiar with the type of energy which fills that man's soul. He doesn't know when to stop. I never heard of his quitting. He will never quit once he enters upon any work in any cause. The other is his absolute honesty under all circumstances; and the third, and I think perhaps one of his outstanding qualities, is that of loyalty. In my life I have never known a man more loyal to his friends, particularly, and to causes in general, than Dr. North.

I want to say to you, Mr. President, it gives me great pleasure to second the nomination of Dr. E. P. North. (Applause.)

DR. G. S. CANNON, Fornfelt: I move the nominations be closed, the rules suspended, and that Dr. North be elected by acclamation. The motion was seconded, and carried by rising vote.

The President appointed Drs. W. H. Breuer and H. S. McKay to escort Dr. North to the Chair, which they did, amid applause.

President Clark introduced Dr. North to the members as the President for the ensuing year.

DR. NORTH, St. Louis: Mr. President and Members of the House of Delegates: It is, to my mind, rather hard to express one's feelings at a moment of this kind; but I am grateful and appreciative for three reasons. The first reason is this: For the first time in my life we have come up from St. Louis with a solid delegation, and when I feel that I have the endorsement of the members of the St. Louis Medical Society, the folks at home, that makes me happier than anything else. The second reason is the fact I have been nominated and elected by a body of this kind, a body that really molds the destiny of the profession in this state, and that election by acclamation makes me doubly proud. The third and last reason is having a man who has done more, to my mind, and certainly much more work than I have ever done, make the nominating speech. I refer to Dr. W. H. Breuer, of St. James.

I do not hesitate to pay this tribute to him. I felt that he should be the nominee and should be elected this time. He has stood for this type of citizenry in an aggressive way that speaks only of real leadership. This was best evidenced, in my mind, as I listened to the Council meeting the other day. He made a motion—he has always stood for high ideals. The Chairman of the Council called his attention to a certain point. Dr. Breuer listened to the arguments pro and con, and withdrew his motion. I can not help but pause and pay a tribute to a man of that character who stands and is ready to take a place, and knows when to take his cue. I only know one man who was ever able to fill his shoes. Dr. Lutz stood in a position where he would take advice, and listen to advice. Ever since his death we have had trouble.

It ill behooves me to stand up and enunciate to you what the policies of this year's work will be. The only thing we can do is to prophesy. I think we are in a position, as far as the economic condition is concerned, which is critical for organized medicine. I do not want to stand here and predict dire results,

but if each of you could realize the weakness of our medical practice act you would surely understand the fearful results that are coming unless we wake up. Understand, when it comes to the legislative program, I want to treat that differently than the standardization in medicine; for instance, the hue and cry about lowering and raising standards.

In the legislative program we have pursued a policy of fighting the cults. I do not mean to criticize the Legislative Committee, because they have done noble work, and through the period of time they have operated, I believe no one could have done better. Dr. Pearse has been absolutely fearless and has passed through the transitional period. I do not believe there is a man in medicine who has rendered the character of service Dr. Pearse has rendered. We have differed at times to a point where we had differences in kind; but I am happy to see that he has been re-elected to the head of the Legislative Committee.

In dealing with the cults, you may think it is heresy, but I am going to tell you what I think. In dealing with the chiropractor I believe the only solution we can suggest is to get away from the destructive program; to get away from the basis of no solution. We have made martyrs of them, and we might as well admit it. The thing to do is if people want to have somebody rub their spines, let them rub them knowingly. Let them have the same type of premedical education we do, the same type of medical standardization and a four-year medical course with therapeutics and what they might consider massage. But let us go to the legislature with some constructive program and not wait until the legislative doors are opened, and slip it under the door and get away. Where a few doctors go up there at the last moment, they are only stigmatized as belonging to the "medical trust."

The Scientists offer a different problem. I do not know whether you fully realize the insidious propaganda the Scientists have been promulgating. One of the smartest men in the city of St. Louis has taken an active interest in the Boy Scout movement. I do not mean to impugn his motives, but nevertheless that is one thing you must consider. He is molding the youth of St. Louis. The idea of having these Boy Scouts sit in the Mayor's chair and the different points of vantage to give them a day's training, and in God's out-of-doors, is the Scientists' propaganda. We know it is in the public schools. It has often been said, "As the twig is bent, so is the tree inclined." We know one of the leading churches of this country asks only for the early training of children, and we can see the end results.

Another thing: The greatest trouble with the smallpox epidemic was through the public schools. It was honeycombed with Scientists. The Kansas City members know and realize they did everything but hang the board of health in effigy. They refused to be vaccinated. We had more trouble in the schools of Kansas City than in St. Louis; that is, concerning the Scientists. I want you to realize this is not mud-slinging. The Scientist has his place, I presume. Some of the brightest minds we have throughout the country are hoodwinked.

As regards medical colleges, I feel this: I know the Class A schools, so-called, are doing wonderful work. To my mind what we need at the heads of our respective departments is practising physicians—men who know the conditions that are met with every day and the needs of the community. It is perfectly natural that a man who has never practised medicine in his life is in no position to direct a re-

ceptive mind as to the proper plans of procedure in carrying on his profession.

I do not want any one assembled here to believe that I for one minute want to lower the standards of the profession; but I do feel that we are allowing men who are doing research work, who are doing wonderful work in medicine, to direct the policies of a scientific, impractical knowledge of their subject to individuals who of course naturally are creatures of environment, and they absorb the same thing. The danger is that we are simply graduating a lot of technicians. The day of the old family doctor is gone. I have traveled over this state in different councilor districts, and it is appalling to see the condition. One of the councilors the other day said in one county there were but four doctors, all located in one town. You can see the conditions. You can see, for instance, what is happening in the developmental period in medicine—that there is an exodus of men to the cities. You can see the prevalent conditions—that a man who is highly trained, highly educated, does not want to go to the country.

They say, "You have community hospitals." That is perfectly all right. But how will you do in counties like Dent, for instance, with practically no railroads in the center of the county, and a distance of twenty miles each way? You can see the community needs of that section. I touch on these points to call them to your attention. I feel this way: As we go along, the only thing to do is to face the issues and not look heavenward, while in the meantime somebody is slipping between our legs. The problem is to interest ourselves in the economic situation confronting us.

I have been told on a good many occasions that my activity in organized work would wreck my practice; that I was simply devoting too much time to organizations and thereby neglecting my practice, and soon I would be known as a "political doctor." Gentlemen, I will tell you: The sooner we get to a point where we interest ourselves in the economic situation in medicine where men go out and express their views and try to do something to improve the condition, the sooner all of us are known as "political doctors," the better off we are.

Take into consideration Dr. J. Franklin Welch, of Salisbury. I lost a night's sleep getting to his funeral. Do you know how many doctors I found there? Four from out of town. There was an outstanding character. You could not come to a single convention but what you found Dr. Welch there. Of course the roads were bad. The men who could not come, telephoned. Here was a man who practically gave his life—a plain country doctor who went out and answered calls of all types, not refusing to answer night calls. We have gotten to a point in some of our city sections where they won't take anything but hospital cases. Personal contact is negative. We are doing a lot of machine diagnoses. Not long ago at St. Louis we were given a burlesque of medicine that I wish might be shown to every family physician in this state. It is a masterpiece of a lot of machine-made diagnoses. I bring that thought to you. It has reached a point where a man who goes out and interests himself with the profession is dubbed a "political doctor." That is the term. You will see a lot of these fellows who will look heavenward and hold their nose when they see some of us coming along trying to save their scalps. Take the men who sit idly by and see these young men robbed of their heritage, and see the chiropractors and what not taking their livelihood away from them. There are some of these towns where the chiropractors have hospitals. There are a lot

of towns, I will guarantee, where the chiropractors are doing as much business as the regular practitioners. No doubt the chiropractor right under Dr. Clark's nose is doing as much business as our worthy President.

We have people who overlook conditions and think the board of health has police power. I had a gentleman come in my room last night and tell me he was going to get after the board; that some fellows were practising without a license. We had to proceed against the arch criminal in the diploma mill on the charge of bad moral character. He said on the witness stand, "All the diploma is used for is to hang on the wall." That is the situation we find, and the profession stands idly by. I have stood the gaff, and thank God! I have not kicked against the pricks. In St. Louis when we tried the offenders who came down? One man came to testify to their moral character, and he was a member of the St. Louis Medical Society! He testified to the moral character of a man who had made false affidavit to get the license. He found out, in addition to the other charges, this man had been indicted for making false affidavits to an insurance company, for receiving stolen automobiles, and also for bootlegging. Yet a member of the St. Louis Medical Society came to testify before our board that this man was a man of good moral character!

There is nobody more appreciative of organized medicine than I am, and I want you to know it. Lots of times I have made enemies and lots of times I have made mistakes. That all goes with differences of opinion.

The trouble is we have not taken the public into our confidence. That is a problem to which I feel we want to give serious consideration. I am not outlining a process of telling the organization what to do. I am desirous of making a few suggestions. The administrations that have preceded have rendered wonderfully efficient service. I am not trying to make innovations. It is not the fault of anybody preceding me. It is the fault of the body politic—of the doctors who are scattered here and there who are not paying any attention and not doing anything but hedging behind a lot of mysterious phrases, as far as the public is concerned.

We have not the confidence of the public. I deal with the newspapers considerably. They editorialized me for two months in one of the St. Louis papers. If it did not occur every other day, I thought something was wrong. Why? Because I did not put on a yellow suit and go down and blow up the editorial rooms. There was not a single statement but what was signed. When you have the confidence of the press, as soon as it realizes you are playing the game fair and square and putting your cards on the table and not hedging behind a lot of personalities and things of that kind, their attitude changes. This paper that assailed me was accused of being a chiropractic organ. After taking these men into our confidence we did not have a bit of trouble.

While I was in Chicago I called on Dr. Fishbein to pay a courtesy I felt was due the major organization. I called on Dr. Colwell and told him the condition we were facing in Missouri; that I thought we ought to go out before chambers of commerce and before Rotarians and Kiwanis Clubs, and explain to them this organization was one that was intended to prevent diseases and to help the public and safeguard the public health, and sell them the idea.

He said, "Doctor, that is my plan throughout. It is the only solution. We have had the mistrust of the public."

I do not believe in the propaganda of certain specialties plying their wares. We have the trachoma hospital, the only one of its kind in the Union, at Rolla. I kept out of it purposely because they would have said, "It is North's propaganda." I brought it into this state in connection with the board.

If we can appear before these organizations and show that our cause is just and couched in language they can understand by men who can explain it, then and not till then will we have the public's confidence.

That can be done, and what I propose to do, with the aid of the respective councilors and the county organizations, before the next legislature opens, is this: Just as soon as the Executive Committee can make arrangements, I want to make the rounds of every councilor district in the state. I want that councilor district to have a public health meeting, and I want to have at that meeting the representative medical men and all the medical men in that district, plus the commercial organizations; and then lay plans for the legislative program that I have in mind before the primaries—start with them there instead of waiting until after they are elected. This is not criticism; it is just a plain statement of facts.

What I want to do is this: I want your help. We need it more than possibly we will ever need it again. You heard Dr. Dodson say they spent \$25,000 to educate the public in Texas. Now, let us be mindful of that one condition. You can not accomplish much without money. I am trying to tell you this: When I go over the state, I am not going to ask the organization to pay my expenses. I am going to contribute that as my part in trying, in a humble way, to aid the leaders. When I refer to the leaders, I mean the men who have been fighting these battles all along. I will play the part of office boy. I will do everything the other fellow does not want to do as best I know how.

I assure you it is a pleasure that has been one of the crowning points of my life; and it is rather hard to express to you just my exact feelings. (Applause.)

THE PRESIDENT: You are always finding out something new about this man North. I knew he was an oculist and treated eyes, but I did not know he was an advocate of easy death. He said he did not believe in keeping the chiropractors from punching other folks if they wanted to, and in the next breath he said, "We will put them under the same regulations as ourselves," so instead of electrocuting them, he would give a dose of opium, but kill them just the same. I think his plan is a good one.

I will ask Dr. Fishbein, of the American Medical Association, to say a few words at this time.

DR. MORRIS FISHBEIN, Chicago. I do not know that I have anything very special to say at this meeting. I came down to talk to the women at noon and to you tonight.

As I see the particular group in front of me, I am reminded of a very good story. Some one asked Al Woods why it was all the bald-headed men sat in the front row. He said, "Well, in times of panic, it is well to have the cool-headed men up in front." (Laughter.)

As I came in the hall, I met one of the delegates. I suppose he was a delegate. He had a badge on, anyway. He said, "That is what you call harmony." "What do you mean?"

"We have just unanimously elected Dr. E. P. North as President."

That's a fine thing, because a man who had the courage to keep up a fight such as Dr. North has had on his hands in recent years deserves the best recognition the Medical Association can give him.

You know what a nasty mess this educational business in Missouri has been. A year ago I remember I wrote for one of the newspaper syndicates the story of the scandal in Connecticut. The *Kansas City Star* published the story. Shortly afterwards I was informed I had been sued for a million dollars. I wrote that if they could find any part of it I would take half! (Laughter.) I was talking to one of the reporters for the *Kansas City Star* and that suit has never come to a head. We rather welcome these suits. It is a rare week when we do not get sued for something. Twice I have been injuncted—if I may use that word—against to stop me from talking or writing! (Laughter.) Anyone who has ever heard me talk or who has seen what I write, can see why they wanted that suit.

I was born in St. Louis, not so many years ago, so I am a native of Missouri, and I feel happy to be in the state again. As the train came in this morning, I thought of the little girl whose family was going to move from Illinois to Missouri. She went into the bedroom and knelt down and started to say a little prayer.

Her mother said, "Darling, what did you say?"

"I just went in and said, 'Good bye, God; I am going to Missouri.'" (Laughter.)

When they heard of that in Missouri, it did not take a clever editor—they raise them in Missouri, and they are holding a conference in Columbia now—long to find what was the matter with it. This editor said the story had been punctuated wrong; that it should be: "Good, by God! I am going to Missouri!" (Laughter and applause.)

Dr. T. W. Cotton, Van Buren, chairman of the committee appointed to report on the letter from the American Medical Association dealing with the reduction of taxes, reported as follows:

WHEREAS, a small tax under the Harrison Narcotic Law is apparently necessary to enable the United States Government to retain jurisdiction over intrastate matters arising under it, and

WHEREAS, The one dollar tax originally imposed being ample for this purpose, and

WHEREAS, The Revenue Act of 1918, which was a general scheme to raise funds to meet expenses of the war, raised this tax to three dollars, where it still remains while other war taxes have been very generally abolished, therefore be it

Resolved, That it is the sense of the Missouri State Medical Association that this is an unjust discrimination against the medical profession and should be removed.

Dr. Cotton moved the adoption of the report. Seconded and carried.

Dr. T. W. Cotton, Van Buren, chairman of the committee, read the following additional report of the committee:

The Revenue Act of 1924 following the Revenue Act of 1921 authorizes the deduction of all ordinary and necessary expenses paid or incurred in carrying on any trade or business before the computation of federal income taxes. It specifically authorizes the deduction of traveling expenses incurred in the pursuit of trade or business. The Commissioner of Internal Revenue, however, denies the right of the physician to make any such deduction of expenses incurred in attendance on medical societies.

Attendance on meetings of medical societies also post graduate study by a physician both have for their object the acquisition of knowledge and skill essential to professional success, being as much a part of his professional equipment as new and modern medical books to his medical library or improved surgical instruments to his operating case. Placing a tax on these is equivalent to taxing the knowledge and skill necessary for the prevention of disease and the relief and cure of suffering, injuries and illness. This attitude is at variance with the spirit of the law and clearly contrary to public policy.

Furthermore, this is not in keeping with the commissioner's other interpretation of the law which allows business men generally to deduct traveling expenses incurred in enlarging and replenishing their business resources. Therefore be it

Resolved, That we earnestly protest against this unjust and discriminating tax and earnestly and respectfully pray the attention of the President and the Secretary of the Treasury to this iniquitous regulation and ask that these expenses be deductible from income tax returns; and be it further

Resolved, That a copy of these resolutions be sent to the President, to the Secretary of the Treasury and to the senators and representatives from Missouri.

E. J. GOODWIN,
W. H. BREUER,
T. W. COTTON,
The Committee.

Dr. Cotton moved the adoption of the report. Seconded and carried.

Dr. T. W. Cotton, Van Buren, chairman of the special committee to report on the committees of the Association that have failed to make reports at this Annual Meeting reported as follows:.

WHEREAS, The National Association for the Control of Cancer has been organized and is functioning very efficiently, the need for a Cancer Committee of this Association no longer exists, Therefore be it

Resolved, That this Committee be abolished.

WHEREAS, The Missouri State Board of Health and the United States Public Health Service are functioning efficiently for the prevention of blindness, therefore be it

Resolved, That the Committee on Prevention of Blindness be abolished.

The defense of vaccination being no longer necessary in Missouri, be it

Resolved, That the Committee on Vaccination be discontinued.

W. H. BREUER,
E. J. GOODWIN,
T. W. COTTON,
The Committee.

It was moved and seconded that the report of the committee be taken up section by section. Seconded and carried.

Dr. Cotton moved that the recommendation of the committee to abolish the Committee on Cancer be adopted. Seconded and carried.

Dr. Cotton moved that the recommendation of the committee to abolish the Committee on Prevention of Blindness be adopted. Seconded and carried.

Dr. Cotton moved that the recommendation of the committee to discontinue the Committee on Vaccination be adopted. Seconded and carried.

Dr. Cotton moved that the report of the committee as a whole be adopted. Seconded and carried.

Report of Committee on Nominations

The Chairman of the committee, Dr. G. Wilse Robinson, Kansas City, reported as follows:

The nominating committee of the Missouri State Medical Association begs leave to submit the following nominations to the House of Delegates:

Vice-Presidents

- First Vice-President, E. A. Dulin, Nevada.
- Second Vice-President, H. W. Carle, St. Joseph.
- Third Vice-President, C. H. Dixon, Moberly.
- Fourth Vice-President, A. R. Rowe, Poplar Bluff.
- Fifth Vice-President, C. B. Trader, Sedalia.

Delegates to the American Medical Association

Delegate, E. J. Goodwin, St. Louis; Alternate, W. M. West, Monett. Delegate, J. C. Lyter, St. Louis; Alternate, Wm. Kerwin, St. Louis.

Members of the Council

- 1st District, F. H. Broyles, Bethany.
- 6th District, J. S. Gashwiler, Novinger.
- 8th District, B. P. Wentker, St. Charles.
- 11th District, J. H. Timberman, Chillicothe.
- 13th District, Geo. E. Bellows, Kansas City.
- 19th District, W. A. Clark, Jefferson City.
- 20th District, W. H. Vogt, St. Louis.
- 21st District, T. F. Estel, Altenburg.
- 22d District, G. S. Cannon, Farnfelt.
- 29th District, R. L. Wills, Neosho.
- Committee on Health and Public Instruction,

Chairman, Herman E. Pearse, Kansas City; member, R. S. Vitt, St. Louis.

Committee on Defense: C. E. Hyndman, St. Louis; W. C. Gayler, St. Louis; H. Unterberg, St. Louis.

G. WILSE ROBINSON, Chairman.
H. S. MCKAY, Secretary.

On motion the report was adopted.

Dr. W. H. Breuer, St. James, moved that the officers nominated by the Committee on Nominations be declared duly elected. Seconded and carried.

The President, Dr. Clark, announced that the amendment to the By-Laws introduced at the previous Session of the House increasing the annual dues from \$5 to \$10 was now ready to be acted upon.

Dr. W. H. Breuer, St. James, moved that the amendment be adopted. Dr. W. H. Vogt, St. Louis, seconded the motion.

Dr. G. S. Cannon, Farnfelt, moved to amend the motion by making the annual dues \$7 instead of \$10. This motion was seconded by Dr. T. W. Cotton, Van Buren.

The question was discussed by Drs. A. R. McComas, W. H. Vogt, C. H. Risley, G. Wilse Robinson, H. S. McKay, G. S. Cannon, T. W. Cotton, H. L. Jones, C. B. Francisco, E. R. Hull, Geo. M. Bristow, Austin McMichael and J. W. Love.

Dr. Frank W. Gillham, Jefferson City, moved to amend the amendment by making the amount of dues \$8 instead of \$7.

This was discussed by Drs. H. S. McKay and Geo. E. Bellows.

After this discussion the President put the motion to the amendment to increase the dues to \$8.

On a rising vote the vote was thirty-three votes in favor of adopting the amendment and nineteen against adoption. The amendment was declared adopted.

The original motion as amended to increase the dues to \$8 was then put and carried.

On motion the House of Delegates adjourned *sine die*.

MINUTES OF THE COUNCIL

Grill Room, Baltimore Hotel, Kansas City,
Monday, May 4, 1925

The Annual Meeting of the Council was held in the Grill Room of the Baltimore Hotel, Kansas City, May 4, 1925, and called to order by the Chairman, Dr. A. R. McComas, Sturgeon, at 1:30 p. m. At the roll call nineteen Councilors responded as follows:

- 1st District, Austin McMichael, Rockport.
- 2nd District, H. S. Conrad, St. Joseph.
- 4th District, G. M. Bristow, Princeton.
- 9th District, A. R. McComas, Sturgeon.
- 10th District, D. A. Barnhart, Huntsville.
- 12th District, Spence Redman, Platte City.
- 13th District, Geo. E. Bellows, Kansas City.
- 14th District, C. T. Ryland, Lexington.
- 15th District, L. J. Schofield, Warrensburg.
- 16th District, T. B. M. Craig, Nevada.
- 17th District, Guy Titsworth, Sedalia.
- 18th District, J. P. Burke, California.
- 20th District, W. H. Vogt, St. Louis.
- 21st District, T. F. Estel, Altenburg.
- 22nd District, G. S. Cannon, Farnfelt.
- 24th District, T. W. Cotton, Van Buren.
- 26th District, W. H. Breuer, St. James.

27th District, J. C. B. Davis, Willow Springs.

29th District, R. L. Wills, Neosho.

Dr. W. H. Breuer, St. James, moved that the reading of the minutes be dispensed with and adopted as printed in *THE JOURNAL*. Seconded and carried.

Report of the Executive Committee

The report of the Executive Committee was read by the Secretary as follows:

The Executive Committee of the Council held four meetings during the year, and there was one general meeting of the Council and officers of the State and county societies held in Jefferson City, January 15, 1925.

At the September meeting we received the resignation of Dr. R. E. Schlueter, Councilor of the 20th District, and member of the Executive Committee. We regret very much that Dr. Schlueter found it necessary to resign from these positions as he has always been a faithful, earnest worker in the society.

The bid of Mr. Ovid Bell, Fulton, for printing the *JOURNAL* for 1925 was accepted at a saving of \$100 per month.

A request from the Missouri Bar Association that we appoint representatives to attend the meeting of the Crimes Committee of the Missouri Bar Association held in Jefferson City, October 15, 1924, was read and Drs. North and Goodwin were appointed to represent the Association at this meeting.

At the meeting held on December 17, 1924, a letter from Dr. J. B. McCubbin, of Fulton, was read, suggesting that a meeting of all the Councilors and other executives of the Association be called for the purpose of discussing proposed amendments to the medical practice act. The Executive Committee had considered such a meeting many times heretofore but on account of lack of funds the meetings had not been held. This year they were enabled to hold such a meeting on account of voluntary contributions to the public health fund. Accordingly this meeting was called for January 15, 1925, at Jefferson City.

The President, Dr. Clark, appointed Dr. W. H. Vogt, St. Louis, to fill the term ad interim caused by the resignation of Dr. Schlueter as Councilor of the 20th District.

Dr. J. C. B. Davis, of Willow Springs, Councilor of the 27th District, asked authority for the county societies of Howell and Oregon to be consolidated and reorganized as the Howell-Oregon County Medical Society which authority was granted.

There was also a request from Dr. T. B. M. Craig, of Nevada, Councilor of the 16th District, that Vernon and Cedar Counties be authorized to reorganize as the Vernon-Cedar County Medical Society which authority was also granted.

At the meeting of the Executive Committee, February 12, 1925, the following statement was issued for publication in the newspapers:

"At a meeting of the officers of the Missouri State Medical Association held in Jefferson City, January 15, 1925, certain amendments to the medical practice law were approved for introduction in the General Assembly, to correct the defects in the present law. The public should be greatly interested in this matter since these amendments to the law concern the health and welfare of the people.

The present law is deficient and the Missouri State Board of Health has been acting under this law which accounts for much of the criticism of its acts. We have full confidence in the integrity of every member of the board of health and we en-

dorse their action demanding a grand jury investigation at which time all the records of the board of health will be reviewed.

We earnestly solicit the endorsement and cooperation of the press and public in the enactment of these amendments."

This statement was given out just before citations were issued by the State Board of Health to some sixty physicians to appear and show cause why their licenses should not be revoked.

At the meeting of April 15, 1925, the Secretary reported the death of Dr. H. L. Reid, of Charleston, Councilor of the 22nd District. The President appointed Dr. G. S. Cannon, of Farnfeldt, to act as Councilor until the Annual Meeting which was approved by the Executive Committee.

The President, Dr. Clark, reported that the legislature had failed to appropriate \$15,000 for the physical education of students in the high schools and stated that Dr. Curtis, in charge of physical education for the department of education, was campaigning among civic organizations for voluntary contributions to make up a sufficient fund to carry on this physical education in high schools until the next session of the legislature and Dr. Curtis had requested our Association to contribute \$500 to this work. After discussion the Committee decided that this subject be brought to the attention of the House of Delegates at this meeting where we hope a full discussion of this question will be had.

On account of lack of funds the Committee was compelled to discontinue the services of our legislative agent, Mr. Wm. Condon. During the term of his employment his services were invaluable and we regret that the condition of our finances is such that we found it necessary to discontinue his employment.

The meeting of the Councilors with the Committee on Health and Public Instruction and the officers of the Association was productive of great good in that for once we were agreed upon the amendments to be introduced to the medical practice act. Heretofore, there has always been a difference of opinion but this time we were practically all agreed. As was stated above this meeting was made possible by voluntary contributions to the public health fund. In contributing to this fund the names of many men stand out for their handsome contributions and the interest manifested. On the other hand many entire county societies contributed not one cent. This is a situation that demands earnest consideration. If we are to forge ahead and do the things that a society state-wide in its scope should do to hold its place among other organizations of like character we must necessarily have sufficient funds; therefore, the question arises shall we depend upon the generosity of a portion of our membership or shall we increase the dues to an amount sufficient to produce the revenue which we must have to carry on the work becoming to such an organization? With no more problems confronting them than we have the states of Indiana, Illinois, Ohio, Oregon, New York, Maine, Texas, Wisconsin, Michigan and California have found it necessary to increase their state dues to \$10 or more. If our state dues were increased to \$10 and the money wisely spent, we could not only help the county societies and individual members but we could enlighten the public on matters of health and preventive medicine.

On April 23, we received the sad news of the death of our once President and long time Treasurer, Dr. J. Franklin Welch, of Salisbury. It is the duty of the Chairman of the Executive Committee

to fill this vacancy and on account of the satisfactory arrangements Dr. Welch had with the Traders Bank, of Salisbury, Dr. G. W. Hawkins, of Salisbury, was appointed Treasurer until the Annual Meeting.

THE CHAIRMAN: In addition to this report I will say that very few of our members realize the difficulties under which the State Board of Health labored in its trials of the men cited to show cause why their licenses should not be revoked. It would be hard for any one who did not actually have a part in these trials to describe conditions. I think it certainly is due the State Board of Health that we give some expression favorable to the work they have accomplished. It has been done under great difficulties.

Dr. W. H. Breuer, St. James, moved that the report be received and the recommendations be acted upon separately. Seconded and carried.

Dr. W. H. Vogt, St. Louis: I think we all realize the efforts the State Board of Health has made in its endeavors to rid this state of undesirable practitioners and it is up to us to show our appreciation of their efforts. They have done it at the expense of personal time and money and it was no small job. It was a task that carried with it much obligation and much criticism and one that very few of us, I think, would have been willing to tackle. I, therefore, move that the Council express its appreciation of the work done by the Missouri State Board of Health in ridding the state of the undesirable members of the profession, and commend the board with the hope that they will continue with their excellent work. Seconded and carried.

Dr. W. H. Breuer, St. James, moved that the Council recommend to the House of Delegates the appropriation of \$100 per year for two years to the physical training of pupils in the high schools, the amount to be paid to the physical education bureau of the department of education of the state. Seconded and carried.

Dr. W. H. Breuer, St. James, moved that the Council express its appreciation for the valuable services rendered to the Association during the past year by Mr. Wm. Condon, our legislative agent. Seconded and carried.

The question of increasing the dues from \$5 to \$10 was discussed by Drs. W. H. Vogt, H. S. Conrad, G. W. Hawkins, Guy Titsworth, T. W. Cotton, Geo. E. Bellows and W. H. Breuer.

Dr. G. S. Cannon, Fomfelt, moved that the Council recommend to the House of Delegates that the dues be increased from \$5 to \$10 per year. The motion was seconded and after further discussion carried.

The action of the Executive Committee authorizing the hyphenation of Howell and Oregon County Medical Societies was approved.

The action of the Executive Committee in authorizing the hyphenation of Vernon and Cedar County Medical Societies was approved.

The Chairman appointed the following Auditing Committee: Drs. W. H. Breuer, St. James, D. A. Barnhart, Huntsville, and T. W. Cotton, Van Buren.

The Secretary read a communication from Dr. T. M. Monroe, Hannibal, a member of Audrain County Medical Society, who had applied for membership by transfer in the Marion County Medical Society and was refused membership in the Marion County Medical Society. He stated that Dr. Monroe had not specifically appealed to the Council from the action of the Marion County Medical Society but has renewed his membership in Audrain County Medical Society. After discussion, Dr. G. W. Haw-

kins, Salisbury, moved that the matter be laid on the table until such time as it comes before the Council and that Dr. Monroe and the county medical societies be properly notified. Seconded and carried.

REPORTS FROM COUNCILOR DISTRICTS

Fourth District

DR. GEORGE M. BRISTOW, Princeton: I am Councilor of the 4th District, including the counties of Mercer, Grundy, Putnam and Sullivan. Our work has not been up in results to date to what we had hoped. Our counties are located in a way that is very difficult getting across east and west on account of the condition of the roads and the lack of railroad transportation, but I have visited each county about twice during the past two years. We have succeeded in getting voluntary contributions from three of our counties, I believe. I think one has probably not reported.

Failing to get interest from the counties individually, an effort was made last fall to get a united effort of the four counties, and through the courtesy of the Grundy County Medical Society we put forth an effort that was to some extent successful. However, our attendance from two of the counties was very small. We made this meeting worth while by reason of outside help. We were favored by a visit from the President of the State Board of Health and other men from Kansas City and St. Joseph, and by this means we felt our meeting was one worth while. We would encourage this effort in other districts on account of seeing the effects of it in our county and our district.

Ninth District

DR. A. R. McCOMAS, Sturgeon: In the 9th District we have one county where it is difficult to get any regular meeting, namely, Howard. I have tried a number of times in years past and we have promise of meetings, but they never materialize. Whether it is my fault or the fault lies somewhere else, I do not know.

Montgomery County has at times had very good meetings, but they do not meet regularly.

The other counties in the district are active and are all doing good work.

Tenth District

DR. D. A. BARNHART, Huntsville: Macon, Randolph and Monroe are my counties. I think we have one of the most active organizations in Randolph County in the state. We have missed but one meeting in four years. We hold the meetings in different towns. Sometimes we have clinics and sometimes just papers. Before we got our county thoroughly organized a good many doctors were crosswise. Now they are on friendly terms and it has been a wonderful benefit.

Macon County has a good organization but the number of doctors has been reduced and they do not meet regularly.

Monroe County has not an active organization. I believe I shall take Dr. Davis' advice and see if we can get them to combine with Randolph County Society, because a good many of them visit our meetings every month.

Once a year for three years we have had a general meeting and have invited our wives. I think it is a very valuable thing to do. We have a social meeting. It gets our wives acquainted with each other and helps wonderfully toward the Woman's Auxiliary.

We have had two malpractice suits. In one a man failed to diagnose a case of smallpox during a bad epidemic. People were exposed and one or two members of the family died. Suit was brought for \$10,000 and they got quite a large judgment. I think it was carried to the higher courts but the case was compromised.

The other was a hospital case where a patient was operated for a wisdom tooth and there was a fracture of the jaw bone. A dentist was included in the suit. The suit was tried in Columbia three weeks ago and decided for the defendant.

Twelfth District

DR. SPENCE REDMAN, Platte City: I am happy to report that the condition of the counties comprising the 12th District is, I think, better than it has been since I have had any knowledge of the condition of these various counties. We have three very active county societies: Clay, Platte, and Caldwell. The others are doing good work but not meeting as regularly as the ones I have mentioned. They are meeting successfully and with good attendance. The societies are small, with the exception of Clay, which has quite a membership, and are working under difficulties to maintain an organization.

I regret that the counties in our district contributed very little toward this voluntary fund for legislative work the past year. That makes me feel a good deal like the other gentlemen who have spoken, that it should be divided proportionally and in accordance with membership. That was the reason assigned by a great many of these men for failure to contribute.

Thirteenth District

DR. GEORGE E. BELLOW, Kansas City: The 13th District consists of Jackson County alone, and the entire organized medical profession in that district is our Jackson County Medical Society.

The Councilor has taken matters up in cooperation with the Council of the County Medical Society. He attended the meeting in Jefferson City, January 15, and reported to the County Society.

Fourteenth District

DR. C. T. RYLAND, Lexington: In Lafayette County we are working pretty actively. We had a malpractice or damage suit in our county. The man sued was not a member at that time but is now. We did not call on the State Society for assistance. The doctors of our county voluntarily went to his assistance, and he came out fairly well. There was a member from an adjacent county society who testified against this gentleman. His testimony did not amount to much.

Our society is doing good work.

Fifteenth District

DR. L. J. SCHOFIELD, Warrensburg: We are going in for clinics instead of papers in our counties. We have a clinic every three months. We enjoy that work better than papers.

So far as the action of the counties themselves, they are not active but in the organizations of the various counties we are active.

Sixteenth District

DR. T. B. M. CRAIG, Nevada: Vernon County has been actively working and Cedar has been cooperating. Bates is organized again. Barton and Dade are not active. Things generally I think are a little better.

Seventeenth District

DR. GUY TITSWORTH, Sedalia: About the same condition as a year ago. Some counties are active and others not so active.

Eighteenth District

DR. J. P. BURKE, California: I have not been successful. When I received your letter with regard to the contribution, I could not do anything with them. That is one of the reasons I voted for this \$10 because they will know it is for the state, and I do not think we will have any trouble.

Twentieth District

DR. W. H. VOGT, St. Louis: My district comprises St. Louis City and Franklin County. On account of my comparatively recent appointment to this position, I have not been able to give much attention to Franklin County yet. The remarks I made briefly regarding St. Louis will probably apply here.

Twenty-First District

DR. T. F. ESTEL, Altenburg: I have no report to make. I was in the hospital at the time when I should otherwise have been getting ready to make the rounds.

Twenty-Fourth District

DR. T. W. COTTON, Van Buren: Ripley County is not organized. I think there are probably four physicians there but I have not been able to get them interested.

Butler County has a good society. Through their activities they paid the expenses of a noted physician from Chicago and invited the rest of the district to visit at a meeting of their society ten days ago, and we had a splendid meeting.

Stoddard County has a pretty good society. I have not visited them this year.

Wayne County I have not visited either. They are organized. I do not know whether or not they are very active.

Carter-Shannon has been fairly active this year. Under the work of the county society, we were able to get the State Board of Health to send us a trachoma clinic. At that clinic there were 135 cases examined and 16 operated. The work was very successful and the people appreciated the effort very much. I think the county society has rendered a decided service to our people. They are planning to have a tonsil and adenoid clinic, and the county society is working to that end. The date is set for the twelfth of this month. We have a county nurse who is helping to work those things out and cooperating with the county society.

At a meeting of our society a few weeks ago it was reported by one of our members that they had an irregular man who had not filed his certificate with the county clerk and had made no report of his obstetrical work. The county society passed a resolution asking the county attorney to make investigation as to this gentleman. He did so, and filed information on two counts; one for practising without recording his license, and another for practising obstetrics without sending in the report as required under the vital statistics law. This case was tried this week. He was fined \$50 and costs on one count, and \$10 and costs on the other.

On the whole, I think we are doing better work than we ever have. Our doctors are working together in the interest of these clinics. It has been of great service to our people.

Twenty-Sixth District

DR. W. H. BREUER, St. James: We have not many doctors in our part of the country. My district is the 26th, comprising Crawford, Phelps, Pulaski, Laclede, and Dent. Dent has five doctors and Pulaski has six. I met with the medical societies of Crawford and Dent counties a short time ago. They had a joint meeting. We had a nice meeting. In Phelps County, all the doctors but five live in Rolla.

We have had several meetings during the past year. We have a secretary who has been very fine, but the last year he has fallen down on the job. Some of us would have been suspended if it had not been for our State Secretary. We paid our dues, but our secretary failed to send them in. Finally he sent them in. The State Secretary is the life of this Association.

I do not know whether you folks know it but the doctors are leaving the country. A railroad runs through our county. Phelps has three towns and for a distance of thirty miles there is not a doctor located. Pulaski is the same way. Every doctor in Dent County lives in Salem. It is a serious condition but we are doing the best we can.

I called a meeting of all the members in the entire district to meet at Rolla in November, and we had a good meeting. There are so few in each county, we must get them all together. We are going to have them all meet together in August. We are making arrangements to invite some nationally prominent man.

The State Board of Health saw fit to locate the Trachoma Hospital at Rolla. I can not tell you what wonderful work they are doing. If you have trachoma cases send them in to the Trachoma Hospital for they are doing wonderful work in the prevention of blindness and saving the sight of a large number of men and women who would be blind within the next few years, making them useful citizens rather than charges upon the state.

Twenty-Seventh District

DR. J. C. B. DAVIS, Willow Springs: I have one county in my district that is not organized. It is hopeless to organize it. It is off the railroad and I think possibly has one or two doctors not legally qualified who live there. It is so far from anybody people are glad to have them, anyway. We invited the doctors to come to Howell County and participate with us.

Wright-Douglas County society meets once every two months and is doing good work. I visited the meeting at Mountain Grove and they had a good meeting. They had some men outside the county to hold a clinic.

Howell and Oregon counties have had separate organizations until recently, meeting regularly and doing good work. A few months ago we asked permission to let them unite to increase the interest. They meet regularly every four weeks and are doing better work than ever before.

When the proposition came up of sending subscriptions to our Secretary to be used for legislative work, having something like twelve members in the Howell County organization, we got their unanimous vote to send \$50. Oregon County may have contributed later. Wright-Douglas county did not have a meeting at that time but they sent a small amount. I asked the Secretary to put the proposition up to the next meeting to increase that amount, which was done, sending a second contribution.

Twenty-Ninth District

DR. R. L. WILLS, Neosho: We have not been doing a great deal in the Newton County Society. It is not very active. McDonald County is not organized. Jasper County has an active society. I may say without hesitation Jasper County has as good a county society as any county in the state. I feel proud to have held the position of Councilor with this county in my district.

Wednesday, May 6, 1925

The Council was called to order by the Chairman, Dr. A. R. McComas, Surgeon, at 11 a. m., Wednesday, May 6, 1925.

At roll call eighteen members of the Council responded.

On motion the reading of the minutes of the previous meeting was dispensed with.

THE CHAIRMAN: For a number of years we have called upon a gentleman in St. Louis on numerous occasions for advice and he has responded at all times with his counsel in directing us in the execution of our affairs. For this service he has declined to receive any remuneration, assuring us that he considered it a privilege to contribute his services to the organized medical profession of Missouri. I feel the responsibility for this condition for some years ago I consulted him about our affairs and at that time he gave us advice and counsel freely and without fee, knowing the restricted condition of our treasury. I refer to Mr. Morton Jourdan, St. Louis, whom we are privileged to refer to as our attorney. Several years ago the Council appropriated a small sum for the purchase of a gift to be presented to Mr. Jourdan as a mark of our appreciation for his services. I feel that we should at this time appropriate a sum that would purchase a gift which would in some measure approach an expression of our gratitude to Mr. Jourdan and our appreciation of the valuable services he has rendered to us. I would be glad to entertain a motion that the Council appropriate \$500 for the purchase of such a gift for Mr. Jourdan as a token of the esteem in which we hold him and to express in some small measure our appreciation of his interest and cooperation with us.

Dr. W. H. Breuer, St. James, moved that the Council appropriate \$500 for the purchase of a gift to Mr. Morton Jourdan and that Dr. McComas be appointed a committee of one to secure this token and present it to Mr. Jourdan with the compliments of the Missouri State Medical Association. The motion was seconded by Dr. T. B. M. Craig, Nevada, and carried unanimously.

Report of the Auditing Committee

Dr. W. H. Breuer, St. James, reported for the Auditing Committee as follows:

Your Auditing Committee has examined the books of the Treasurer and checked the bills with the books and compared them with the balance and the bank books and find them correct. We have also checked the books of the Treasurer with those of the Secretary and find that they correspond.

W. H. BREUER, Chairman,
D. A. BARNHART,
T. W. COTTON,

The Committee.

On motion the report of the Auditing Committee was adopted.

Election of Officers

The election of officers of the Association and of the Council was the next order of business.

Dr. W. H. Breuer, St. James, nominated Dr. A. R. McComas, Sturgeon, for Chairman of the Council. This was duly seconded.

On motion the nominations were closed and Dr. McComas was elected Chairman of the Council by acclamation.

Dr. G. S. Cannon, Fornfelt, nominated Dr. G. W. Hawkins, Salisbury, for Treasurer of the Association. This was duly seconded.

On motion the nominations were closed and Dr. Hawkins was elected Treasurer of the Association by acclamation.

Dr. W. H. Vogt, St. Louis, nominated Dr. E. J. Goodwin, St. Louis, for Secretary of the Association. This was duly seconded.

On motion the nominations were closed and Dr. Goodwin was elected Secretary of the Association by acclamation.

The question of the salary of the Secretary referred to in the President's message was discussed and Dr. W. H. Vogt, St. Louis, moved that the Secretary's salary be \$500 per month.

Dr. G. S. Cannon, Fornfelt, moved to amend the motion by making the salary of the Secretary \$400 per month. Seconded by Dr. T. W. Cotton, Van Buren, and carried.

Dr. W. H. Breuer, St. James, nominated Dr. E. J. Goodwin, St. Louis, for Secretary of the Council. This was duly seconded.

On motion the nominations were closed and Dr. Goodwin was elected Secretary of the Council.

Dr. T. B. M. Craig, Nevada, nominated Drs. A. R. McComas, Sturgeon, Chairman, W. H. Breuer, St. James, and W. H. Vogt, St. Louis, members of the Executive Committee. This was duly seconded.

On motion the nominations were closed and Drs. McComas, Chairman, Breuer and Vogt were elected members of the Executive Committee.

On motion adjourned.

MINUTES OF THE GENERAL MEETING

Francis 1 Room, Baltimore Hotel, Kansas City

Tuesday, May 5, 1925—Afternoon Session

The first scientific session of the Sixty-Eighth Annual Meeting of the Missouri State Medical Association was held in the Francis 1 Room of the Baltimore Hotel, Kansas City, Tuesday, May 5, 1925, and was called to order by the President, Dr. W. A. Clark, Jefferson City, at 1:15 p. m.

The first paper on the program was read by Dr. R. A. Woolsey, St. Louis, on "Inguinal Hernia."

The paper was discussed by Drs. K. W. Kinard, Kansas City, and A. H. Cordier, Kansas City.

The following papers were read in the Symposium on Acute Diseases of the Upper Abdomen:

"Surgical Conditions of Gastric Origin," by Dr. A. E. Hertzler, Kansas City.

"Surgical Conditions of Pancreatic Origin," by Dr. E. Lee Miller, Kansas City.

"Surgical Conditions of Hepatic Origin," by Dr. R. D. Irland, Kansas City.

"Intrathoracic Lesions Simulating Abdominal Conditions," by Dr. J. Q. Chambers, Kansas City.

"Incidental Factors in the Treatment of Gastric Ulcer," by Dr. J. I. Tyree, Joplin.

These papers were discussed by Dr. T. G. Orr, Kansas City; Dr. Sam Snider, Kansas City; Dr. John M. Dodson, Chicago; Dr. C. J. Hunt, Kansas City; Dr. A. E. Hertzler, Kansas City, closed the discussion.

Dr. Warren Rainey, St. Louis, read a paper entitled "Steinman Pin Traction in Fracture of the Leg."

Dr. H. E. Pearse, Kansas City, read a paper entitled "Management of Fracture of the Femur."

These papers were discussed by Dr. R. M. Schaufler, Kansas City; Dr. C. B. Francisco, Kansas City; Drs. Rainey and Pearse closing the discussion.

Evening Session

The evening session was called to order by the President, Dr. W. A. Clark, Jefferson City, in the Francis 1 Room, Baltimore Hotel, at 8:15 p. m.

Dr. John M. Dodson, Chicago, Illinois, addressed the meeting on the subject of "Periodic Health Examination: The Plan Endorsed by the American Medical Association."

Dr. Frank I. Ridge, Kansas City, read a paper on "Cooperation by State and County Medical Societies."

Dr. James Stewart, Jefferson City, read a paper on "The State Board of Health and Its Relation to the Public."

Hon. J. Henry Caruthers, Jefferson City, Assistant Attorney General, read a paper on "Remedial Laws in Relation to Public Health."

Wednesday, May 6, 1925—Afternoon Session

The second meeting of the scientific session was held in the Francis 1 Room of the Baltimore Hotel, Kansas City, and called to order by the President, Dr. W. A. Clark, Jefferson City, at 1:30 p. m.

Dr. A. L. Skoog, Kansas City, read a paper on "Tryparsamide Therapy in Neurosyphilis. Report of Cases."

The following papers were read in the Symposium on Goiter:

"Reflections of an Internist on the Thyroid Problem," by Dr. C. H. Nielson, St. Louis.

"Surgical Management of the Goiter Patient," by Dr. H. S. McKay, St. Louis.

"Choice of Anesthetic in Thyroid Operations," by Dr. Ellis Fischel, St. Louis.

"Pathology of Thyroid Hyperplasia," by Dr. Ralph L. Thompson, St. Louis.

"X-ray and Radium in Goiter," by Dr. E. H. Skinner, Kansas City (Read by Dr. Ira H. Lockwood, Kansas City).

These papers were discussed by Dr. E. P. Sloan, Bloomington, Ill.; Dr. E. P. Buddy, St. Louis; Dr. J. D. Seba, Bland; Dr. C. H. Wallace, St. Joseph.

Dr. W. A. German, Kansas City, read a paper entitled "Changes in the Chest Wall in Tuberculosis."

This paper was discussed by Dr. Logan Clendenen, Kansas City; Dr. Sam Snider, Kansas City; Dr. Frank I. Ridge, Kansas City.

Evening Session—President's Reception

The evening session was called to order by Vice-President, Dr. H. L. Kerr, Crane, in the Francis 1 Room of the Baltimore Hotel, Kansas City, at 8:15 p. m.

The President, Dr. W. A. Clark, Jefferson City, delivered the President's Address entitled "Medical Education, Medical Legislation and Medical Distribution."

Dr. Morris Fishbein, Chicago, Editor of *The Journal American Medical Association*, delivered an address entitled "Mirrors of Medicine."

The reception to the President, with music and refreshments, followed the conclusion of the addresses.

Thursday, May 7, 1925—Afternoon Session

The scientific session met in the Francis 1 Room,

Baltimore Hotel, Kansas City, Thursday, May 7, and was called to order at 2:10 p. m. by the President, Dr. W. A. Clark, Jefferson City.

Dr. Logan Clendenen, Kansas City, read a paper entitled "Progress in Our Knowledge of the Diseases of the Cardiovascular System in the First Quarter of the Twentieth Century."

There was no discussion on this paper.

The following papers were read in the Symposium on Obstetrics:

"Obstetrical Problems," by Dr. W. C. Gayler, St. Louis.

At the conclusion of this paper Dr. Gayler presented a specimen of Siamese Twins.

This paper was discussed by Drs. W. H. Vogt, St. Louis; George C. Mosher, Kansas City; Wm. Kerwin, St. Louis.

"Management of the Nausea and Vomiting of Pregnancy," by Dr. E. C. White, Kansas City.

This paper was discussed by Drs. Buford G. Hamilton, Kansas City; G. D. Royston, St. Louis.

"Tooth Destruction in Pregnancy and Methods of Control," by Dr. Wm. Kerwin, St. Louis.

This paper was discussed by Drs. G. F. Pendleton, Kansas City; George C. Mosher, Kansas City; Wm. Kerwin, St. Louis, closing the discussion.

"Diagnosis and Treatment of Sterility," by Dr. G. D. Royston, St. Louis.

This paper was discussed by Drs. H. McClure Young, St. Louis; Wm. Kerwin, St. Louis, George C. Mosher, Kansas City.

These papers concluded the scientific work of the Association.

The Secretary, Dr. E. J. Goodwin, St. Louis, moved that a vote of thanks be extended to the members of the Jackson County Medical Society for their excellent arrangement of the clinics and clinical material at the hospital, and for their generous entertainment of the Association; to the management of the Baltimore Hotel for the use of their meeting rooms; and to the Convention Bureau for its cooperation in making our registration and meeting a success. The motion was seconded and carried by a rising vote.

On motion meeting adjourned, sine die.

MEDICAL SECRETARIES' ASSOCIATION

Seventeenth Annual Session

Kansas City, May 6, 1925

The Seventeenth Annual Luncheon and Meeting of the Medical Secretaries' Association was held in the Blue Room of the Baltimore Hotel, Kansas City, May 6, 1925. The President, Dr. Claude J. Hunt, Kansas City, delivered the address of welcome. He also spoke of the wonderful progress in hitherto unpopulated areas which has been made possible through the advancement of medical science and in this connection cited the fever infested Canal Zone of a few years ago as compared with its present healthful sanitary conditions. In regard to county society work Dr. Hunt stressed the fact that unless meetings are held at specified times a good attendance cannot be expected. He suggested that counties having a small membership might hold joint meetings with other county societies; these to take the form of public meetings and speakers of prominence invited to participate. The Woman's Auxiliary, too, might be made a very beneficial factor in the interests of public health by getting their various organizations interested in public health measures.

Dr. Hunt at the conclusion of his speech introduced

to the members Mrs. E. J. Goodwin, the bride of our beloved Secretary of the State Association and also introduced our newly elected President of the Association, Dr. Emmett P. North, St. Louis.

A round table discussion followed in which Dr. J. J. ("Uncle John") Gaines, Excelsior Springs, was asked to give his views on county society work. Dr. Gaines said: "The first requirement of a medical society is, of course, membership and this is always a motley group. We have found in our county that it is better to take in a man who may not just be toeing the mark and reform him than to have him stay out of the society where he may continue to go from bad to worse. There is one thing sure about such a procedure and that is that if a fellow like that once gets into the society he's going to walk the straight and narrow path for he is afraid to do otherwise and we believe that many a man has been helped in this manner. About meetings—they should not be too frequent. Under no conditions would I suggest weekly meetings; in fact, we have found bi-monthly meetings a very good plan. The next question in regard to meetings is the location of meeting places and this, of course, each society must work out for itself, roads, accommodations, etc., being an important factor. In regard to programs I would suggest that the programs be on a symposium order devoting each meeting to a special subject. Another way we stimulate interest in our meetings is by inviting the ladies and we generally have a luncheon or dinner. We have adopted this plan in Clay County and I want to tell you it works. Another thing along this line is reporting the meetings of your society and sending them to the editor for publication in *THE JOURNAL*. When members see that their secretary is on the job and see the list of other fellows who were at the meeting they begin to think that it must be a pretty good thing and they too begin to climb onto the band wagon."

At this point "Uncle John" recited one of his original poems which was very much to the point and thoroughly enjoyed by everyone present.

Dr. Hawkins, Salisbury, our newly elected Treasurer of the State Association, reported that one of our members, Dr. J. D. Brummall, Secretary of Chariton County Medical Society, is ill in a hospital. The members present expressed their regrets and the hope that the doctor would soon be able to be out.

Dr. Spence Redman, Platte City, who has been a secretary for the past thirty years, said: "Speaking from the standpoint of a secretary of a small county medical society there are two points to consider in this work, namely, program and fellowship and of the two I think fellowship is the more important. In regard to program plans I think the home talent plan the best. This gives every man a chance to say something and every man feels that he has had an opportunity to express his belief and experience. This need not be the rule for all meetings because some of the members may be anxious to hear distinguished guests from the cities and I think it really wise to have an outside man at least once a year to give us a good talk. I think it would be a good idea to discuss our business propositions for an hour or so at the annual meeting of the county society, having one paper or one discussion on some subject connected with the business of the doctor himself, that is, a non-scientific paper. In regard to fraternalism among the doctors of Missouri—in my section of the state I am very happy to say that the doctors are getting along on much better terms with each other which in itself has a great deal to do with our advance-

ment as a society. The Woman's Auxiliary, I believe, can be of much service as a means of dissemination of the movements fostered by the profession. Platte County has made very satisfactory progress in the last few years and we feel that it has come about by the adoption of Clay County's plan of having a joint meeting of the doctors and their wives with usually a luncheon or dinner."

At the request of the President, Dr. W. H. Vogt, of St. Louis, Councilor of the 20th District, gave his views on county society work. Speaking on this subject Dr. Vogt said it was his opinion that these annual meetings of the secretaries were splendid times for the expression of experience in county society work. It seemed to him that the matter of attendance at county society meetings was the most difficult to control. There being so many special societies to detract from the attendance it is his idea that the best results could be obtained by bringing before the society a program of importance to the general practitioner and leave the ultra-scientific programs to the specialists.

Dr. M. P. Overholser, Harrisonville, was called upon for his views and expressed the opinion that these annual meetings of the secretaries were beginning to bear fruit since by getting the secretaries together and talking over society matters they were imbued with an interest in the work and naturally the society is benefited by this enthusiasm. It was his opinion also that the public should be invited to the meetings and in other ways be made cognizant of the true facts of medical science.

The election of officers for 1925-1926 was the next order of business and resulted as follows: President, Dr. George H. Thiele, Butler; vice-president, Dr. Austin McMichael, Rockport; Secretary, Dr. J. T. Hornback, Nevada.

The following were present: F. A. Barnes, Thayer; D. A. Barnhart, Huntsville; C. W. Brown, Campbell; John F. Chandler, Oregon; Scott P. Child, Kansas City; J. W. Dawson, Eldorado Springs; Mrs. J. W. Dawson, Eldorado Springs; E. A. Dulin, Nevada; J. J. Gaines, Excelsior Springs; E. J. Goodwin, St. Louis; Mrs. E. J. Goodwin, St. Louis; Mrs. Rosa Hibbard, Kansas City; J. T. Hornback, Nevada; Claude J. Hunt, Kansas City; Jabez N. Jackson, Kansas City; N. W. Jarvis, Festus; W. E. Koppenbrink, Higginsville; J. G. Lapp, Kansas City; Mrs. Pearl Lutz, St. Louis; Austin McMichael, Rockport; Hermon S. Major, Kansas City; W. T. Martin, Albany; J. S. Montgomery, Milan; E. W. Moore, Corder; Emmett P. North, St. Louis; Everett A. Oliver, Richland; M. P. Overholser, Harrisonville; Spence Redman, Platte City; H. A. Rhoades, Foster; C. H. Risley, Cameron; G. Wilse Robinson, Kansas City; E. P. Sloan, Bloomington, Ill.; Geo. H. Thiele, Butler; John H. Timberman, Chillicothe; W. L. Viers, Pleasant Hill; W. H. Vogt, St. Louis; Cyril P. Vores, Unionville. J. T. HORNBACK, Secretary.

REPORT OF THE TREASURER

General Fund

Receipts

Balance on hand May 1, 1924.....	\$ 5486.60
Advertising	6369.65
Rent	450.00
County Dues	15869.25
Return Draft Serven Bond.....	5.00
Furniture Sold	65.00

Interest on Balance	89.40
	<u>\$28334.90</u>

Disbursements

Vouchers Paid	\$23428.43
Balance May 2, 1925	4906.47
	<u>\$28334.90</u>

Legislative Fund

Receipts

Balance on hand May 1, 1924.....	\$ 1373.75
Transferred from General Fund.....	3172.15
Interest on Balance	28.50
	<u>\$ 4574.40</u>

Disbursements

Vouchers Paid	\$ 3019.86
Balance May 2, 1925	1554.54
	<u>\$ 4574.40</u>

Defense Fund

Receipts

Balance on hand May 1, 1924.....	\$ 1559.27
Interest on Balance	33.00
	<u>\$ 1592.27</u>

Disbursements

Vouchers Paid	\$ 500.00
Balance May 2, 1925.....	1092.27
	<u>\$ 1592.27</u>

Sinking Fund

Receipts

Balance on hand May 1, 1924.....	\$ 622.57
Interest on Balance	18.00
	<u>\$ 640.57</u>
Balance May 2, 1925	<u>\$ 640.57</u>

Recapitulation

General Fund	\$ 4906.47
Legislative Fund	1554.54
Defense Fund	1092.27
Sinking Fund	640.57
Total	<u>\$ 8193.85</u>
G. W. HAWKINS, Treasurer.	

REPORT OF THE SECRETARY, 1925

The county societies are functioning as a general rule with only fair success. The larger counties have little trouble about holding meetings which arouse the interest of the members and they take an active interest in public health questions. But the smaller county societies find difficulty in doing this. I believe the time has come when the State Association must devise some method of assisting the small societies to make their organizations influential bodies. We should help them make their meetings a benefit not only professionally but also for the instruction and enlightenment of the people in their communities on preventive medicine and medical legislation. The stability of the structure of the State Association rests upon the activity of the component societies. If these societies do not function, the State Association can accomplish little or nothing. We should have funds to pay the expenses of speakers for the county society meetings and to enable the councilors to visit their counties at fre-

quent intervals. I believe the councilors should meet at least once a year together with the officers of the Association and the expenses of the trip should be paid by the State Association. Such meetings would enable us to discover the weak points in many counties that might be remedied and stimulate new efforts to build up the weak societies.

Revocation of Licenses

I wish I could picture to you in all its graphic phases the work of the State Board of Health in preparing information and indictments against persons who obtained licenses through fraud. No board within my knowledge has ever faced such an arduous task as that which confronted the present board during the past two and one-half years. No one, and least of all the members of the board themselves, claims that the board has not made mistakes. But throughout the investigation of the records of the board and of the lives of the members, which latter took on the character of espionage of their private lives at times, no one has been able to find a peg upon which to hang the cloak of dishonor. I attended the trials held by the board when it revoked the licenses of some of the offenders and I can say that the responsibility carried by every member of the board was no light burden. Those accused of fraud and other offenses fought with every legal weapon at their command to retain the rights they had acquired but the board had prepared its cases so well that in spite of lack of cooperation by persons who should have given them every legal and professional assistance in their power the board proceeded with an evident determination to correct any mistakes that had been made and to protect the honor and dignity of the reputable medical profession. The board has revoked the licenses of seven persons, including the license of Dr. Waldo Briggs, St. Louis, Dean and owner of the St. Louis College of Physicians and Surgeons, and will begin the trials of fifty others on May 11. Two of those cited by the board were exonerated as the evidence did not show sufficient grounds for revocation.

Death of Dr. Welch

Most of you are aware of the great loss we have sustained in the death of our Treasurer, Dr. J. Franklin Welch. He died on Thursday, April 23. A suitable memorial of his life and his service to the Association will, I am sure, be adopted by the House of Delegates.

Death also removed from our ranks, Dr. H. L. Reid, of Charleston, Councilor of the 22d District, a man who has filled many important offices in the organization, always with intelligence, dignity and loyalty to the principles of organized medicine.

Guests

We have as guests at this meeting Dr. Morris Fishbein, Chicago, Ill., Editor of *The Journal American Medical Association*, who will give us an address at the president's reception, Wednesday, May 6, and Dr. John M. Dodson, Chicago, Ill., Secretary of the Bureau of Health and Public Instruction of the American Medical Association, who will deliver an address at the open meeting on Tuesday, May 5.

Cooperation of the State Board of Health

I have had several conferences with the new Secretary of the State Board of Health, Dr. James Stewart, who has taken hold of the work with an

enthusiasm that presages thorough accord with the purposes of our organization.

Status of Membership

Number of Members April 1, 1924.....	3304
New Members	133
Reinstated	3
	136
	3440
Resigned	6
Transferred	38
Dropped	23
Deceased	42
Expelled	1
	110
Total April 1, 1925.....	3330

E. J. GOODWIN, Secretary.

REPORT OF THE COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION

Senate Bill No. 83 and House Bill No. 223

Two identical bills known as the amendments to the medical practice act, Sections 7332, 7334 and 7336 of the Revised Statutes of Missouri, 1919, as amended in 1921 and 1923, were introduced on January 23, 1925, in both branches of the General Assembly by Senator Guy L. Mitchell and Representative W. H. Bailey, both physicians and members of our Association. They were reported from both committees on the same date, February 18, with recommendation that they *do pass*. House Bill No. 223 was not engrossed. A fight was made against it by the Christian Scientists and various other cults in an attempt to amend the bill so as to exclude all persons except those holding the degree of Doctor of Medicine from the provisions of the bill. Senate Bill No. 83, however, passed the Senate unanimously by a vote of 25 to 0 in its original form, and was sent to the House for passage. There it remained on the calendar one of the first twelve bills for a period of three weeks waiting to be voted on. It finally came to a vote in the latter part of March, ten or twelve days after the regular session of seventy days had expired, when the opponents of the bill succeeded in having seven amendments adopted which in effect destroyed the purpose of the bill in that chiropractors, Christian Scientists and osteopaths were exempted from the provisions of the law. The bill was then passed by the House in its amended form by a vote of 114 to 9. This put the bill in conference. A conference committee was appointed by both House and Senate who met and made their report and voted to strike out the objectionable amendments. The House was asked to recede from its stand. The House voted on the adoption of the conference report on April third, seventeen days after the regular session had ended, and the report failed of adoption by a vote of 58 to 34, there being less than 100 members answering the roll call out of the total membership of 150. A constitutional majority of 76 was required for the adoption of the report. A motion was made and carried that another conference committee be appointed, but the session then being in its closing days and not considering any measures other than appropriation bills, further attempts for another conference were useless and the bill was allowed to die in conference along with every other bill that had gone to conference. The attitude of the legislature at this time, with hardly a quorum present, was to pass nothing

but appropriation bills and go home. When it is remembered that this bill reached the House in the early weeks in March and remained on the calendar for three weeks with no action being taken on it, and when we recall that the House was in the midst of a political battle, the majority party being unable to pass its revenue and administrative measures, we cannot wonder that the bill was lost. Had it been possible to get the bill to a vote within a reasonable time after reaching the House, there is no question but that it might have received more favorable consideration. All bills of importance that went to conference, with the exception of one, failed of adoption.

House Bill No. 4 and Senate Bill No. 42 (Chiropractor Bills)

The chiropractor bill was introduced in the House on January twenty-first, the first day of introduction of bills and the Senate Bill on January twenty-third. The Senate Bill came out of the committee by *agreedo pass* with the understanding that no attempt be made to pass it but to remain on the informal calendar for engrossment until the House Bill reached the Senate, as it was the intention to amend the House Bill in the committee. This was done by adding five amendments to it, and it was reported out favorably from the House. It was engrossed by a small majority by a rising vote. When the bill came up for passage in March it received 89 votes, many members voting for it who were not in accord with the principles of the bill, but who expressed a belief that the Senate would kill the bill as it had in the past. The bill finally reached the Senate and was reported from committee *do pass*. When it came to a vote it was again amended in the closing days of the session. The amendments adopted by the Senate wholly destroyed the effects of the bill. The chiropractors abandoned it and it was immediately placed on the informal calendar where it died along with about one hundred other bills. As stated above, the chiropractor bill died on the informal calendar for engrossment, there being no attempt made to pass it in the Senate. The chiropractor bill met its defeat at the hands of the members of the Senate who were the friends of the medical profession and who so adroitly and skillfully handled the bill so as to insure its defeat. Especially so after the treatment the medical bill received in the House at the hands of friends of the chiropractors who never for a minute relented in their opposition to the medical bill and who were ever ready to join hands and encourage the Christian Scientists in their opposition to it.

General Information

The following bills were defeated in addition to the chiropractor bill: A bill to repeal section 7330 which, if passed, would have repealed the entire medical practice act. Also a bill to repeal Section 7334 which, if passed, would have prevented the State Board of Health from proceeding against unlicensed practitioners. Also two bills to prohibit physicians from writing prescriptions for whisky for use in sickness. One of the bills provided that a doctor could not prescribe for an amount in excess of four fluid ounces of any kind of medicine. There were three undesirable nurses' bills defeated. A bill repealing the present optometry law and enacting a new law in lieu thereof, which new law gave added power to optometrists was defeated.

We regret the loss of the much needed amendments to the practice act. The entire organized pro-

fession was a unit this year. There is no blame upon the Association. The committee just failed to pass the bill.

That portion of the legislative program which had to do with the personnel of the legislature was handled from St. Louis, and the Secretary has undoubtedly told you about that in his report.

At the convening of the legislature, Senate Bill No. 83 and House Bill No. 223 represented the bills we introduced this year. Last year we introduced a general blanket bill bringing everything under the State Board of Health. It was not passed. It died in the legislature owing to the opposition of the various cults that did not wish to be brought under our Board of Health, and because our legislature did not trust our Board of Health. The propaganda had been so persistently spread that they thought it was not fair to ask a hard-working chiropractor to be judged by the standards of the Missouri State Board of Health.

We did not attempt to pass this bill this year, but the seed sown two years ago still persists and we are constantly reminded by thinking people that it was really the right step and that is where they all belong—under the State Board of Health.

Here a while back a young widow who had been left a life insurance was charged \$800 in a single month for treating a bunion on her foot! The chiropractor assured her she would be a helpless cripple inside of three months if she did not submit to his work. When anything like that happens, they attempt to get the approval of the State Board of Health; but it does not exist in the legislature.

This year we gathered together, about the time of the convening of the legislature, all the councilors in consultation with the health department of the state, and made such amendments to the bill as seemed to be necessary in the light of recent development, strengthening our position.

A few of the legislators have been so worried by the continued pounding of the various cults they think all public health legislation is for the benefit of the doctors and that the chiropodists and beauty parlor specialists should be treated alike; and all this public health legislation, according to their talk, is our own little law. They exempted everybody else from the action of this law, which of course is foolish to anyone who thinks about it.

H. E. PEARSE, Chairman.

BOOK REVIEWS

LEHRBUCH DER SPEZIELLEN PATHOLOGISCHEN ANATOMIE. Von Dr. Eduard Kaufmann. VII and VIII auflage. 1922. Berlin und Leipzig: Vereinigung Wissenschaftlicher Verleger, Walter de Gruyter & Co.

Kaufmann's pathology was first published in 1896 in a one volume edition of less than half its present size. The present edition is in two volumes of 1000 and 962 pages respectively; an increase of eight hundred thirty-seven pages over the sixth edition. This would represent then practically the increase of an average size textbook on this subject. The only thing that can be said about this great work is that for more than two decades Kaufmann has been considered the pathologist's Bible. Not only is it inclusive of all the worth while pathological work, but it is so well arranged and evaluated that it has no competition in its line.

In this edition the illustrations have been greatly increased and very fine colored plates added. The press work and paper are also superior to the early editions. One idea of the magnitude of the book can be grasped by stating that one thousand seven hundred and twenty-two references to the literature are listed; an index medicus in itself.

Space is too limited to detail specifically the subject matter of this work, but it may be stated that every subject, from the circulatory organs to the bones and joints, from skin to endocrines, from digestive organs to genito-urinary tract is treated with the greatest completeness. Every chapter opens with a survey of the embryology and anatomy of the organ and is followed by the physiology before pathology is taken up. The literature covered is not by any means confined to the German but worthy contributions, whether in English, French, Italian, Japanese or what not, will be found referred to provided they add to the advancement of our knowledge of pathology. R. L. T.

A TEXTBOOK OF PHYSIOLOGY FOR MEDICAL STUDENTS AND PHYSICIANS. By William H. Howell, Ph.D., M.D., Sc.D., LL.D. Professor of Physiology in the School of Hygiene and Public Health, Johns Hopkins University, Baltimore. Ninth Edition, thoroughly revised. Philadelphia and London: W. B. Saunders Company. 1924. Price \$6.50.

There is perhaps no textbook of any of the medical sciences that is better known to the English speaking medical student than Howell's Physiology. To meet the great demand determined by its popularity it has been necessary to make nine revisions of this book and to reprint it twenty-one times since 1905, a twenty year record which few, if any, textbooks can equal. For the information of the few who may not know the book it may be said that its popularity is due in large measure to the success with which its author has put into effect his endeavor to limit the material selected for presentation to the more fundamental and more important phases of physiology and to present these simply and clearly.

In this newly revised edition a number of changes are to be found which have been made in the effort to keep the book abreast of the active advances under way at the present time in so many different directions. To refer to only a few of the instances of newly incorporated material, mention may be made of the contributions of Hill and Meyerhof to the problem of the chemical mechanism of muscular contraction; of tonus contractions in voluntary muscle and their possible relation to the sympathetic nervous system; of advances in the field of the internal secretions, such, for example, as the isolation of the ovarian hormone by Allen and Doisy and of insulin by Banting and co-workers. It is not to be expected that any one individual could be conversant with the status of all phases of physiology. It is, therefore, not surprising to find that some of the subjects fail to receive adequate consideration. This is true, for example, of the author's treatment of the subject of fibrillary contractions of the heart.

Despite the tremendous increase in physiological knowledge and the frequent revisions and reprintings of the book, it is rather interesting to note that in the twenty years that have elapsed since its first appearance only 160 odd pages have been added to the work. Through deletion of irrelevant material the volume of the book has been kept within the limits a textbook must have if it is to serve as

a valuable adjunct to medical students and to the average practitioner. J. E.

ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1924. Cloth. Price, postpaid, \$1.00. Pp. 82. Chicago: American Medical Association, 1925.

This volume contains the reports of the Council on Pharmacy and Chemistry that have been adopted and authorized for publication during 1924. Some of these reports have appeared in *The Journal of the American Medical Association*. Others are now published for the first time.

The annual volumes of the "Council Reports" may be looked on as the companion volumes to New and Nonofficial Remedies. While the latter contains the medicinal preparations that are found acceptable, the reports contain the reasons why certain products were not accepted. Thus the present volume contains reports on the following products which the Council denied admission to New and Nonofficial Remedies: Aolan; Aspatol; Atussin, Peptoproteasi, Paraganglina Vassale, Fosfoplasmina, Asmoganglina and Endo-Ovarina Tablets; Borosodine; Carsinol; Colodine and Colobromidine; Ferrasin; Glyeuthymenol; Hoyt's Gluten Flakes; Iodeol; Loefflund's Food Maltose; Mistura Creosote Comp. (Killgore's) and Tablets Cascara Comp. (Killgore's); Neo-Riodine; Nicomors; Peptone Solution for Hypodermatic Use (Armour); Pixalbol; "P-O-4"; Pollantin; Promonta; Pruritus Vaccine Treatment-Lederle (Montague Method); Restor-Vin; Some "Mixed" Vaccines of G. H. Sherman and Tersul Hiller.

The volume also contains reports on products which were included in former editions of New and Nonofficial Remedies but which will not appear in the 1925 edition because they were found ineligible for further recognition. Among these are polyvalent antipneumococcic serum, colon bacillus vaccine, gonococcus serum and gonococcus vaccine.

The volume contains a number of reports of a general nature: for instance a report on the therapeutic value of benzyl benzoate; a report on anaphylaxis produced by thromboplastic substances and a report on the therapeutic use of digitalis.

Physicians who keep fully informed in regard to the value of proprietary remedies will wish to own this book.

NEW AND NONOFFICIAL REMEDIES, 1925, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1925. Cloth. Price, postpaid, \$1.50. Pp. 461+XL. Chicago: American Medical Association, 1925.

New and Nonofficial Remedies is the publication of the Council on Pharmacy and Chemistry through which this body annually provides the American medical profession with disinterested critical information about the proprietary medicines which are offered to the profession and which the Council deems worthy of recognition. The book also contains descriptions of nonproprietary medicines which the Council considers worthy of consideration.

In addition to a statement of the actions, uses and dosage of each product, many of these are arranged in classes and these classes are introduced by a general discussion of the group; thus the silver preparations, the iodine preparations, the arsenic preparations and the biologic products are preceded by a thoroughly up-to-date discussion of the group.

A glance at the preface shows that, in addition to the description of the new drugs which were accepted during the past year, the book has been extensively revised; many of the preparations listed in the previous edition have been omitted and the statements of the properties of others have been revised to bring the descriptions in accord with present day knowledge. Of particular interest is the revision of the general articles; thus the article on endocrine products has been entirely rewritten to bring this chapter in accord with the series of articles on glandular therapy which were published in 1924 under the auspices of the Council. A general article on medicinal dyes has been added.

A section of the book (brought up-to-date each year) gives references to proprietary articles not accepted for New and Nonofficial Remedies. This list, in conjunction with the book proper, constitutes a cumulative index of proprietary medicines which physicians may consult when some proprietary product is brought to their attention.

Physicians cannot dispense with the newer remedies that are being brought out, yet they can neither judge them on the basis of the manufacturers' claims nor have they the opportunity or time to determine their merits. For this reason every physician should possess a copy of the annual volume of New and Nonofficial Remedies which the Council on Pharmacy and Chemistry puts at his disposal.

DYSPEPSIA: ITS VARIETIES AND TREATMENT. By W. Solteau Fenwick, M.D., B.S., (Lond.) Late Physician to the Evelina Hospital for Sick Children, etc. Second Edition, revised. Illustrated. Philadelphia and London: W. B. Saunders Company. 1925. 515p. Price \$6.00.

The second edition of Dr. Fenwick's book adds additional emphasis to the views he expressed in the first edition.

He includes many diseases which we are not accustomed to regard as being covered by the term dyspepsia; for example, achylia gastrica and acute chronic gastritis.

Fenwick emphasized the complexity of the gastrointestinal mechanism. A perusal of the book makes us continuously aware of this complexity and to feel that the author might have made more effort to simplify the classification of dyspepsia as well as to clarify the diagnosis and treatment. He still adheres to many old terms such as hyperesthesia gastrica which should be considered obsolete.

In the chapter on splanchnoptosis he does not differentiate between the acquired and congenital form. The book can hardly be recommended as a reference book for the general practitioner. The specialist in gastro-intestinal diseases will, however, find much to interest him and many valuable hints regarding diagnosis and treatment. H. W. S.

OPERATIVE SURGERY. By J. Shelton Horsley, M.D., F.A.C.S. Attending Surgeon, St. Elizabeth's Hospital, Richmond, Va. With 666 original illustrations by Miss Helen Lorraine. St. Louis: The C. V. Mosby Company. 1924. 2nd ed. 784p. Price \$12.50.

This second edition of a most excellent though unique work contains descriptions of several operations which had not been announced prior to the publication of the first edition in 1921. Among these newer procedures are the following: The lymphaticostomy of Costain for diffuse septic peritonitis and late obstruction of the bowels. Stookey's operation for innervating paralyzed muscles, Finney's py-

lorectomy, the pulmonary lobectomy of Evarts A. Graham and the intestinal resection of Kerr. The operations of G. W. Crile for partial lobectomy of the thyroid and for ligation of the superior thyroid arteries are fully described. These and other additions bring it up to date.

Recent and newer views and their bearing upon operations for the cure of malignant growths also add to the worth and usefulness of the volume. It is not an encyclopedia of surgical operations, but it sets forth how the trained surgeon author proceeds in those cases that come to him. All obsolete methods are omitted so that any surgeon's library may, by the addition of this one book to the collection of older works, be brought right up to date.

The illustrations are all good and the work of the publishers has been well performed. R. E. S.

GYNECOLOGY. By Brooke M. Anspach, M.D., Professor of Gynecology, Jefferson Medical College. With an introduction by John G. Clark. Assisted by Philip F. Williams, M.D., Assistant Professor of Obstetrics, Graduate School of Medicine University of Pennsylvania. Second edition, revised and enlarged by the author. 532 illustrations. Philadelphia and London: J. B. Lippincott Company. 752p.

This book in its second edition gives a clear view of modern conceptions of gynecology. It is impossible to draw attention to all the excellent features of this textbook. Omitting unnecessary details it shows thorough familiarity with the needs of daily practice. In addition to the affections of the genital organs, those diseases of the intestinal and urinary tracts which are frequently associated with gynecologic ailments are considered. Most interesting chapters are written on sterility, operative technique, selection of cases for operation, postoperative treatment and management of the postoperative complications, on hygiene and proper care of the adolescent girl, backache and sacroiliac sprain. Modern therapeutic measures like radium and X-ray treatment, Rubin test, mercurochrome treatment, use of vaccines and protein therapy receive adequate consideration. Advances in endocrinology are noted. Even Sampson's work on endometrial implantations has been included. A wealth of suggestions for operative and conservative treatment of the gynecological patient will be found. This book will be extremely useful for the student and practitioner and even the specialist will be benefited by its many valuable suggestions. References to literature are well chosen. It reads well and is devoid of dullness. G. B. L.

FRACTURES AND DISLOCATIONS. Immediate management, after-care and convalescent treatment with special reference to the conservation and restoration of function. By Philip D. Wilson, A.B., M.D., F.A.C.S. Instructor in orthopaedic surgery, Harvard Medical School, and William A. Cochran, M.B., Ch.B., F.R.C.S. Edin., University Tutor in Clinical Surgery, University of Edinburgh. 987 illustrations. Philadelphia and London: J. B. Lippincott Company. 1925. 789p. Price \$10.00.

The book is generally well written, well arranged and well illustrated. It makes a valuable addition to one's library who does this kind of surgery. There is very little new or original and the most valuable and striking feature is the important consideration they have given to the anatomy of the part under consideration throughout the book. Their advice

may be considered bold in some instances in the hands of the general practitioner, which would not be true at all with experts in large institutions.

The authors give very little thought to other than their own choice of the various ways of treating the fracture in question. For instance as important an appliance as the Hodgen splint is only mentioned once and then in quoting another surgeon's experience. The article on fractures of the neck of the femur is well written and should be read by all who are not practicing the more modern methods of treating these important injuries. The authors have more confidence in a good fibrous union than our experience would justify. We have gotten a good bony union or an absorption of the neck in our experience. We also feel that the progress of the case should be checked with the X-ray occasionally, much valuable information being gained in this way as to the prognosis and handling of the case.

M. L. K.

PRINCIPLES AND PRACTICE OF X-RAY TECHNIC FOR DIAGNOSIS. By John A. Metzger, M.D., Roentgenologist to the School for Graduates of Medicine, Medical Department, University of California, Southern Division, Los Angeles. With 61 illustrations. St. Louis. The C. V. Mosby Company.

Since the sale of X-ray equipment is being pushed so hard among the general practitioners nowadays it would seem that a book of this type might find some outlet. The book is strictly confined to technic and the term diagnosis in the title is to be considered in the orientative sense only. There are some sixty very good illustrations of positions in which both a blonde and a brunette serve as models. On the whole we think we prefer the blonde.

R. L. T.

THE PHYSIOLOGY OF MIND. An interpretation based on biological, morphological, physician and chemical considerations. By Francis X. Dercum, A.M., M.D., Ph.D., Professor of Nervous and Mental Diseases in the Jefferson Medical College. Second edition, reset. Philadelphia and London:

W. B. Saunders Company. 1925. 287p. Price \$3.50.

Doctor Dercum just could not help writing this book. It is the belief of the reviewer that Freudianism stirred a noble rebellion in the soul of Doctor Dercum and that this keen analysis of the biological concepts resulted.

A citation of the headings of the chapters, each one of which is a short and concise presentation of the usually accepted view, would serve as an excellent guide to the nature of the essay.

It is well worth the reader's time and effort to let Dr. Dercum help him get his mental feet on the ground.

M. A. B.

THE CRIPPLED HAND AND ARM. A Monograph on the various types of deformities of the hand and arm as a result from abnormal development, injuries and disease, for the use of the practitioner and surgeon. By Carl Beck, M.D. Cloth, 243 pp., 302 illustrations. Philadelphia and London: J. B. Lippincott Company, 1925. Price, \$7.00.

This monograph should be of particular interest to the plastic and orthopaedic surgeon. The general practitioner should also acquaint himself with the many reconstruction problems mentioned in this book.

The author discusses the physiological and reconstructed function of the hand and arm in a very

practical manner. His methods of treating congenital deformities, infections and plastic repairs particularly of the soft parts follow well recognized and quoted authorities and show originality in procedure which is substantiated by case reports, drawings and photographs.

J. G. M.

DISEASES OF THE RECTUM AND PELVIC COLON. By Martin L. Bodkin, M.D., F.A.C.S. New York. Rectal Surgeon, St. Catherine's Hospital; Associated Surgeon, Broad Street Hospital, etc. New York. E. B. Treat & Company. 1925. Illustrated. Second edition, revised and enlarged. Price \$6.00.

Dr. Bodkin's book is written in textbook style. The statements are dogmatic and very few authorities are quoted. However, he gives credit to many of the older textbook writers on rectal diseases in his preface.

The chapter on "Intestinal Flora" can hardly be said to represent the best modern medical opinion. In the chapter on "Irrigation of the Colon" he draws a distinction between the high and the low colon enema. As a matter of fact it is impossible to put a solution in the rectum and retain it any length of time without it going up higher into the colon. The author appears to be obsessed with the notion held in common with most New York writers on this subject that the colon is a sewer which should be flushed out by means of irrigations.

His statement that appendicostomy irrigation is the best treatment for amebic dysentery is open to question. The use of an inflator in the proctosigmoidoscope is to be condemned as being unnecessary and dangerous.

The book is clearly written and contains some very good illustrations.

H. W. S.

THE PRACTICAL MEDICINE SERIES. Volume V. Gynecology, edited by Thomas J. Watkins, M.D., F.A.C.S. Obstetrics, edited by Joseph B. De Lee, A.M., M.D. Under the General Editorial Charge of Charles L. Mix, A.M., M.D. Series 1924. Chicago. The Year Book Publishers, 304 South Dearborn St. Price \$2.00. Price of the series of eight volumes, \$15.00.

This book is particularly valuable to the man who is behind in his reading and who does not attend many medical conventions. The whole field of gynecology and obstetrics is covered but we recommend particularly certain chapters. The chapter on use of Radium and X-ray in malignant and benign growths is interesting because uniform technique and uniform opinions do not exist. The newest conception of dysmenorrhea, the accepted technique of plastic operations are brought down to date. The obstetrical part is less interesting because our opinions of the old problems change more slowly and there are less rapid startling changes of opinion. However, the collective opinion on the Kielland forceps, version, new technique, Cesarean section, placenta previa, and eclampsia, are brought down to date.

W. C. G.

SURGICAL PATHOLOGY. By William Boyd, M.D., M.R.C.P., Ed. F.R.S.C. Professor of Pathology, University of Manitoba; Pathologist to the Winnipeg General Hospital, Winnipeg, Canada. With 349 illustrations and 13 colored plates. Philadelphia and London. W. B. Saunders Company.

In a volume of about 850 pages, Boyd covers the subject of surgical pathology exceedingly well.

It is particularly well adapted for use as a textbook for the young surgeon and the student.

It is eminently sane and is replete with fundamental facts which every medical practitioner should know. There is little controversial and nothing that is obscure. It is, in the reviewer's opinion, the best book for this purpose which has yet appeared.—A. E. H.

PRACTICAL ANAESTHETICS. By H. Edmund G. Boyle, O.B.E. (Mil.), M.R.C.S. (Eng.), L.R.C.P. (Lond.) Anaesthetist to St. Bartholomew's Hospital, and Hewer C. Langton, M.B., B.S. (Lond.) M.R.C.S. (Eng.), L.R.C.P. (Lond.) Assistant Anaesthetist to St. Bartholomew's Hospital. Third edition. London: Henry Frowde and Hodder & Stoughton. American Branch, Oxford University Press, 35 W. 32 st., New York City. 187p. Price \$2.00.

Seemingly, this volume should meet with the approval of all anesthetists because it deals with the practical views. It is rather unique in the introduction with the elaboration of the history of anesthesia. It can be recommended to the general profession as concise, interesting and instructive.
E. S.

THE DENTIST'S OWN BOOK. A faithful account of the experiences gained during forty-six years of dental practice including a complete bookkeeping and recording system and a description of the management of a dental practice. By C. Edmund Kells, D.D.S. New Orleans, La. With 116 illustrations. St. Louis: The C. V. Mosby Company. 1925. 510. Price \$7.50.

In this book the writer has given a lot of information which has been collected over a period of about forty-five years as a practitioner of dentistry. Many practical hints to a young man about to enter practice are contained in the volume.

For one who wishes to read the life work of a successful dentist, this book can be recommended. A better title would be "My Own Book." V. L.

LA MATIERE VIVANTE. Organizations et différenciations origines de la vie colloïdes et mitochondries, Par J. Kunstler, Professeur d'Anatomie comparée et Embryogénie à la Faculté des Sciences de Bordeaux, et Fred Prevost, Ancien Elève de l'Ecole Normale Supérieure, Agrégé des Sciences naturelles. Paper, 253 pp., 18 fr. Masson et Cie, Paris, 1924.

This volume of 250 pages deals with the fundamental biological functions of the cell. It is of particular interest to those interested in colloidal chemistry and the problem of the mitochondries.

A. E. H.

PSYCHOPATHIA SEXUALIS. By Dr. R. V. Krafft-Ebing. Only Authorized English Adaptation of the Twelfth German Edition, by F. J. Rebman. Revised edition. New York. Physicians and Surgeons Book Company, 353 West 59th st. 1924.

A book that has gone into twelve editions as has this classical work needs little comment. Such a book undoubtedly fills a necessary place in our medical literature particularly as it may serve to influence legislation and medical jurisprudence to a certain extent. As was stated in the preface to the first edition: "The scientific study of psychopathology of sexual life necessarily deals with the miseries of man and the dark side of his existence."

THE PRACTICAL MEDICINE SERIES. Comprising Eight Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Charles L. Mix, A.M., M.D. Volume 11. General Surgery. Series 1924. Chicago, The Year Book Publishing Company, 304 South Dearborn Street. Price \$3.00.

Ochsner's Yearbook has been so long before the profession that all that need be said is that this volume like its predecessors, is the best available abstract of surgical progress.—A. E. H.

THE CHEMICAL ASPECTS OF IMMUNITY. By H. Gideon Wells, Ph.D., M.D., Professor of Pathology, University of Chicago, Director of the Otho S. A. Sprague Memorial Institute. N. Y., The Chemical Catalog Company, Inc. Book Department. 1925. 254 p. (American Chemical Society Monograph Series.)

This book will appeal to the advanced workers in chemistry and immunology. Its chapters include studies of the antigens, immunological specificity, the nature of the antibodies, the nature of toxin-antitoxin reactions, agglutination and precipitation reactions, the lytic reactions, anaphylaxis, and such complicated subjects. It will fill a useful and important place in the technical monographs of the American Chemical Society.—R. L. T.

PRACTICAL LECTURES. Delivered under the auspices of The Medical Society of the County of Kings, Brooklyn, New York. 1923-1924 Series. Paul B. Hoeber, Inc., New York. 1925. Price \$5.50.

This is a collection of talks on carefully chosen topics by twenty-three eminent eastern specialists and teachers. They have kept the general practitioner in mind throughout, avoiding the realm of theory and experiment, and have consequently produced an exceedingly practical book.

Several chapters are devoted to diagnosis of the so-called acute abdomen; others to such subjects as backache, diabetes and insulin, the common skin diseases, office orthopedics and office gynecology, all of which should be of great interest to anyone engaged in general practice.—B. M. B.

THE SURGICAL CLINICS OF NORTH AMERICA. Volume V, Number 1 (New York Number—February 1925) Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London; W. B. Saunders Company.

This number contains descriptions of operations and other work done at the clinics in the various hospitals of New York City given during the meeting of the American Congress of Surgeons in October, 1924. Numerous subjects are discussed including exophthalmic goiter, gastric and duodenal ulcer, sarcoma of the long bones, tumor of the spinal cord, a survey of the Roentgen ray, urological work, and other interesting clinical demonstrations.

SURGICAL CLINICS OF NORTH AMERICA. Volume V, Number II. (New York Number—April, 1925.) W. B. Saunders Company, Philadelphia and London.

The New York number of this excellent publication is unusually interesting. As might be expected the large number of clinics in New York have supplied a great variety of material for this issue. There are thirteen contributors to the number and clinics at ten hospitals. The book contains 632 pages with numerous illustrations.

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies
Issued Monthly under direction of the Publication Committee

VOLUME XXII

AUGUST, 1925

NUMBER 8

E. J. GOODWIN, M. D., EDITOR
901 Missouri Building, St. Louis, Mo.

PUBLICATION } W. H. BREUER, M.D., Chairman
COMMITTEE } C. B. FRANCISCO, M.D.
M. A. BLISS, M.D.

ORIGINAL ARTICLES

MASTOIDITIS A CAUSE OF GASTRO- INTESTINAL DISTURBANCES IN INFANTS*

H. W. LYMAN, M.D.

ST. LOUIS

Much has been written about focal infections of the paranasal sinuses in children and their effect on the general system, but little has been said about the systemic effect of a focal infection in the ear. I desire to present for your consideration tonight only a single type of these aural focal infections, showing that a close relationship exists in infants between a middle ear infection and disturbances of the gastro-intestinal tract. Briefly, this type of case is characterized by vomiting, diarrhea and loss of weight. There is present an inflammatory condition of the middle ear and a temperature ranging from 38° to 40° Centigrade. The most painstaking regulation of feeding fails to control the gastro-intestinal symptoms unless the infection in the ear is recognized and relieved.

What we believe to be the solution of this problem has been worked out under the direction of Dr. W. McKim Marriott, Medical Director at the St. Louis Children's Hospital. It was noticed in a number of cases in which the chief complaint was malnutrition, accompanied by vomiting of feedings and diarrhea, that after a free opening of the tympanic membranes there being an acute otitis media present, the gastro-intestinal symptoms subsided and the child began to gain in weight.

In other cases, after this preliminary improvement, there would follow a rise in temperature and a return of the vomiting and diarrhea, which symptoms would again clear up after a re-opening of the drum head, and the case would pursue a normal course under proper feeding after the ear infection had subsided. All cases however did not result

thus happily. Some of them, in spite of all efforts in the way of diet regulation and repeated opening of the ear drums to maintain drainage, went on to a fatal termination. In certain of these cases Dr. Marriott and his colleagues were convinced that there was no other cause for the gastro-intestinal disturbance except the infection in the ears, autopsies failing to show any other demonstrable lesion.

This situation presented an otological problem as to why some of these cases did so well after a paracentesis and in others the same procedure had no appreciable effect upon the gastro-intestinal disturbance. Our conclusion was that in the cases which pursued a favorable course the drainage of the focal infection in the ear, through the paracentesis wound, was adequate and that no further systemic absorption occurred, while in the cases uninfluenced by paracentesis the swelling of the mucous membrane within the tympanic cavity and the character of the discharge, which was usually very thick and tenacious, were such that thorough drainage was impossible through the tympanic route and that systemic absorption of toxic materials continued in spite of repeated openings of the drum head.

A brief consideration of the anatomical aspect of the tympanic cavity in infants discloses a number of facts which seem to verify this explanation. At birth the tympanic cavity is filled with mesodermal tissue, which is later absorbed, leaving the various folds of mucous membrane that persist in the tympanic cavity in later life. This resorption begins in the lower portion of the cavity and by the eighth week the lower and middle portions of the tympanum form a distinct cavity, but with thick mucous membrane folds still persisting. The upper portion of the tympanum, the so-called epitympanic space, is not freed from this mucous tissue until the first or even second year.

It seems quite reasonable that if the otitic infection is limited to the lower part of the tympanic cavity an incision through the drum head will afford satisfactory drainage, but if the infection invades the upper portion of the tympanum paracentesis will prove inade-

*A preliminary report read before the St. Louis Medical Society, December 16, 1924.

quate. It, therefore, seemed a logical procedure, in those cases which did not do well after a paracentesis, to perform a simple mastoid operation and open the mastoid antrum for the purpose of obtaining drainage of the antrum and upper portion of the tympanic cavity. This was done in a number of cases with the most gratifying results and has convinced us that a mastoid operation is a justifiable and often a necessary procedure in the treatment of this type of case. The operation in itself is not a severe one as the mastoid development in these babies is quite primitive, consisting usually of a single cell—the antrum—although in several infants we have found two, three, and even four distinct cells. The operation has usually been done under local anesthesia and with comparatively little or no shock to the patient. Unfortunately, the mastoids have not always been opened early enough in the course of the disease to arrest the process and all of the cases have not recovered; but the results have been such that we are convinced that in these cases of infants with infection in the middle ear cavity, who are suffering from gastro-intestinal disturbances, the early opening of the mastoid antrum and the establishment of adequate drainage will save many whose lives have heretofore been lost.

The striking features of these cases, from an otological point of view, are that the ear symptoms are not those characteristic of the usual mastoid abscess in children, and the ear symptoms alone are not always sufficient to indicate operation. There is seldom any post-auricular swelling and the discharge from the ear may seem quite sufficient. The decision to operate must be based on the clinical course of the patient, chiefly on the temperature and the continuance of the digestive disturbances.

These cases fall, naturally, into four groups.

GROUPS

1. Cases making perfect recoveries after paracentesis.

(This group fortunately comprises most of the cases.)

2. Cases in which repeated paracenteses fail to afford relief.

3. Cases in which repeated paracenteses and opening of both mastoid antra fail to relieve.

4. Cases in which mastoid operation is followed by amelioration of all gastro-intestinal symptoms.

Following is a brief summary of one case of each type:

CASE REPORTS

Type 1. J. F. M. Infant, aged three months. Admitted July 27. Chief complaint, malnutrition, vom-

iting of all feedings. Temp. 37.6. Physical examination, negative. July 30, Temp. 39.8. Both membrana tympani red, the right bulging. Both incised. There was a free flow of pus from the right and a sero-purulent fluid from the left. Temperature dropped to between 37 and 38.

August 3, Temp. rose to 40. August 4, Double paracentesis. Temp. dropped. August 19, Temp. rose to 39.4. Double paracentesis. Temp. dropped to 37.4. August 29, Patient discharged, having gained 900 grms. in weight.

Type 2. Re-admission of same infant. Had gained 260 grms. at home. Sept. 5, Temp. rose to 39.6. Both ears began discharging, diarrhea returned. Physical examination, negative, except enlarged spleen and liver, which were not present at time of previous discharge from the hospital.

Sept. 10-16, ears draining thick andropy pus. Treatment consisted of swabbing out the canals and inserting wicks for drainage. Sept. 18, paracentesis. Sept. 19, paracentesis. Temp. rose to 41. Sept. 21, Temp. 37.8, drum beads red and thickened, thick pus coming through incisions, canal swollen and inflamed. Sept. 23, ears draining thick pus. Ears continued to drain a thick,ropy pus until October 2, when temp. went above 40 and remained so all day. Patient developed signs of bronchial pneumonia and died.

Type 3. C. M. Aged two months. Admitted, November 4. Chief complaint, loss of weight. Had been fed three times in 24 hours and was greatly undernourished.

Nov. 11, has been taking feedings well, but does not gain in weight. Temp. about 38. Membrana tympani are injected but not bulging. Nov. 13, Temp. 38.4. Right membrana tympani bulging. Incised, pus obtained. Left membrana tympani negative. Nov. 14, Right ear draining well. Left membrana tympani red. Nov. 16, Temp. continues to reach 38.2 to 38.6. Right ear draining poorly, very thick, tenacious pus. Left ear very red, no bulging. Incised. Profuse flow of pus. Nov. 17, Double paracentesis, right, pus welled up; left, discharge of bloody fluid.

Nov. 18. A mastoid operation was requested because of the general condition of the patient and because the temperature, somewhat characteristic of infection, showed no improvement under drainage through the tympanic membrane. A simple mastoid operation was done on the right side under local anesthesia and pus and granulations found filling the antrum. This was cleaned out, a rubber drain inserted, and the patient returned to bed in good condition.

Nov. 20, Temp. still up. Left ear show considerable thick, mucoid discharge. The tympanic membrane bulging slightly in spite of free incision. Left mastoid opened under local anesthesia and found filled with thick, mucopus and granulations.

Nov. 25. Temp. rose to 41.2 with no discoverable cause except the ear condition. Through and through drainage was established in both ears by curetting through the mastoid wound. The temp. continued high, and, on Dec. 4, patient developed signs of bronchial pneumonia and died December 6.

Type 4. W. M. Aged two months. Admitted, September 30. Weight, 3200 grms. Has not gained in weight. Has vomited after almost every feeding for over a month. Has had cough since September 12. Scrotum swollen. Both membrana tympani reddened. Numerous coarse rales all over both sides of chest. Abdomen distended, wall rigid. Three or four greenish stools per day.

October 2. Both membrana tympani red and bulging. Double paracentesis. October 3. Membrana tympani have closed, both are red. No discharge. Four p. m., left membrana tympani bulg-

ing. Incision followed by a gush of serum. October 8. Temp. 38.9, undoubtedly due to ears. Both membrani tympani red. October 9. Temp. 39.6. Right membrana tympani normal. Left membrana tympani red. October 12. Temp. 41.4. Right membrana tympani bulging. Opened, free flow of pus obtained. Left membrana tympani same. October 13. Temp. dropping. Marked discharge of thick mucopus from both ears. October 17. Both ears discharging considerable pus. October 18. Both ears discharging freely. Temp. 39.8. Right membrana tympani wide open. Left draining, but still bulging. Left paracentesis. October 19. Temp. 39.6. Both ears draining profusely. Mucous membrane of nose and throat very red. Coarse rales throughout chest. October 21. Free discharge from both ears. October 22. Temp. 38.8. Profuse discharge from both ears. Right membrana tympani bulging. Incised with free discharge of serous fluid. October 23. Free discharge from both ears. October 24. Both membrana tympani reopened. October 26. Temp. 39.8. October 27. Discharge from both ears much thinner. Right membrana tympani bulging. Incised. Nasal discharge increased. Chest condition improved.

October 29. Temp. 39.8. Double mastoid by Dr. A. M. Alden under local anesthesia. Both antra found filled with pus and granulations, after which a small mass of adenoid tissue was removed. Patient's condition seemed better following this procedure, but temperature did not completely subside for several days, there being an exacerbation on November 4 when it reached 40, after which it gradually subsided to normal and the weight steadily increased. Vomiting ceased, stools became normal. November 22. Temp. rose to 39.2. Discharge appeared in left ear canal. November 23. Both mastoid wounds reopened and antra curetted out. Some pus was found in left. Temperature promptly returned to normal and gain in weight was resumed. December 2. Discharged, weight 4100 grms. Net gain, 900 grms.

700 Carleton Bldg.

THE NON-TUBERCULOUS HIP OF EARLY LIFE

J. ALBERT KEY, M.D.

ST. LOUIS

1. IN INFANCY

Tuberculosis is the most frequent affection of the hip in early life and while it is most frequent in early childhood, especially between the ages of three and five years, it may occur at any age from infancy to senility. For this reason perhaps it has been more widely studied and is more generally well known than are all of the other hip conditions of childhood combined. This is so true that the terms, "Hip disease" and "Coxitis" are in common use and in medical literature are accepted as being synonymous with tuberculosis of the hip. This is of course a bad practice because there are a large number of nontuberculous hip conditions and many of them are inflammatory in nature.

The hip is a relatively small joint which has

a wide range of motion and frequently receives the weight of the body suddenly and with great force. It is surrounded by the strongest muscles in the body and on account of the length of the femur is subject to tremendous leverage. Its architecture is such that its ligaments are almost never sprained and dislocation is unusual, especially in early life. Consequently the force of the frequent traumata falls on the cartilage and bone. For this reason perhaps it is frequently the seat of disease. In cases of bone tuberculosis the hip is involved more frequently than any other region of the body except the spine. It may be involved in any of the various types of arthritis, and because of its anatomic and physiologic peculiarities the hip is subject to certain specific conditions which are not seen in other joints.

Because of its deep seated location and the wide variety of conditions which may affect it the diagnosis of hip conditions is often difficult and the prognosis and treatment are indefinite. Consequently we are perhaps justified in taking stock, as it were, of the hip in pre-adult life and considering briefly a number of the less common affections which, if taken separately, are rather rare and relatively unimportant, but if taken en masse comprise a large percentage of the hip cases in young people seen by the average orthopedic surgeon.

It will be convenient to consider the hip at three periods of life: Infancy, childhood and adolescence, because, while there is some overlapping, certain conditions are peculiar to each period.

Infancy will be considered as comprising the first two years of extrauterine life. During this period the conditions to be dealt with are syphilis, scurvy, acute epiphysitis of the hip, and congenital malformations.

Congenital syphilis is most commonly manifested by an osteochondritis at the epiphyseal regions of the long bones, characterized by the laying down of calcium salts at the end of the diaphysis (Guyon's line) with broadening and irregularity of the epiphysis. This condition is not as a rule important except as a part of the general disease, but in certain cases it may give rise to marked symptoms and even cause separation of the epiphysis. The clinical picture is that of a flaccid, painful paralysis of one or more extremities and is generally known as the pseudoparalysis of Parrot. It is most common in the second month of life but may be present at birth or occur as late as the 18th month. The disease begins insidiously without trauma and the child is not acutely sick. It is noted that the baby refrains from moving one or more extremities and cries when the extremity is moved passively. The limb lies extended and inert and if the child is lifted it

hangs as a dead weight and he is apparently unable to move it. The electrical reactions of the muscles are normal and if the skin is pinched the muscles contract, but the limb is moved slightly or not at all. The pain is not spontaneous and if the infant is left quiet he does not cry, but if he is moved or the region of the affected epiphysis palpated he cries vigorously. Palpation reveals a swelling of the epiphyseal region and there may be a sense of fluctuation from a purulent synovitis or a subcutaneous abscess. The patients are often cachectic and usually exhibit other manifestations of congenital syphilis. The prognosis is grave as many of these cases die of cachexia or intercurrent disease. The treatment resolves itself into the treatment of syphilis and the general hygiene and health of the baby and the local treatment of the diseased joints. If the epiphysis is separated it should be replaced and the joint fixed in good position; in the case of the hip, abduction, extension, and internal rotation. With vigorous antisyphilitic therapy, if the child survives, the epiphysis will reunite and a good limb result.

Scurvy may resemble Parrot's disease and be mistaken for it, or it may lead to the diagnosis of tuberculosis of the hip. The onset is preceded by a long period of faulty diet. It rarely begins before the eighth month. The onset is insidious, the child is not acutely sick but fretful and cries when handled. It is noted that one or more extremities are tender in the juxta-epiphyseal region. The tenderness and fretfulness increase and the affected extremity becomes swollen and apparently paralyzed. There may be the characteristic swollen, spongy, bleeding gums and subcutaneous ecchymoses on the affected limbs. Anemia and cachexia are usually present. In advanced cases epiphyseal separation may occur. The prognosis is good and prompt recovery is to be expected under an antiscorbutic regime. The affected extremities should be immobilized, especially if epiphyseal separation has occurred.

Acute epiphysitis or acute suppurative arthritis of the hip is not a rare condition in children's clinics. The disease is a blood borne infection from a pyogenic focus elsewhere in the body. The primary focus in the hip is usually in the epiphyseal line, though at times it is undoubtedly an osteomyelitis of the neck of the femur, and in some cases is perhaps synovial in the beginning. The onset is sudden and the child becomes acutely sick with high fever and rapid pulse. The hip is held in moderate flexion and any at-

tempt to move the joint causes acute pain. Unless the patient is seen very early in the disease the region of the hip is swollen, hot, tense, and exquisitely tender. Blood examination shows a polymorphonuclear leucocytosis. The X-ray is negative, or may show a distended capsule with slight clouding of the joint area. The treatment is surgical drainage of the joint and this should be done as an emergency procedure as soon as the diagnosis is made because destruction of the joint progresses rapidly and septicemia may occur. Drainage is most easily and effectively made by one of the posterior incisions, either of Ober or of Langenbeck. If at operation it is found that epiphyseal separation has occurred, the head should be removed to facilitate drainage. If left in it is a septic sequestrum and prolongs the period of infection. After operation the limb should be put up in traction in moderate abduction and extension. The prognosis is on the whole poor. Many of these children die. Of those that survive the hip is often either ankylosed or the femoral head and neck eroded and the stump of the neck subluxated.

The congenital deformities to be considered are coxa vara and congenital dislocation of the hip.

Coxa vara at birth is a rare condition and is often associated with other gross malformations. As a primary congenital deformity all gradations ranging from the normal hip through coxa vara of varying degree, or absence of the upper end of the femur, to complete absence of the femur may occur. A second type of congenital coxa vara is that present in achondroplasia.

Congenital coxa vara is of the cervical type, that is the deformity is in the neck of the femur. The angle of the neck with the shaft is decreased, often to less than 90 degrees. This causes the trochanter to be higher than normal and the lower extremity to assume an abducted position. As the deformity is usually bilateral shortening is not evident. Abduction is limited. Unless the deformity is extreme the condition is often overlooked until the child begins to walk. Then the marked lordosis and waddling gait attract attention and the first impression is that one is dealing with a bilateral congenital dislocation of the hip. The diagnosis is made by finding the head of the femur in the acetabulum, and by the X-rays which show the deformity. The treatment is osteotomy, best done in the trochanteric or subtrochanteric region, and fixation in marked abduction until union is firm.

Congenital dislocation of the hip is fairly common and because of its frequency and the necessity for early treatment is the most important hip condition of infancy. It is much

NOTE: Part 2, In Childhood, and Part 3, The Adolescent Period, are to follow.

more frequent in girls than in boys, the ratio being about seven to one. About a third of the cases are bilateral.

As a rule the condition is not diagnosed until the child begins to walk, when the lordosis and limp or waddling gait attract attention and the physician is consulted.

The pathological changes progress slowly with advance in years. In children the head of the femur rests on the posterior surface of the ilium. The acetabulum is shallow and partly filled with fat and fibrous tissue. The head is deformed from the abnormal pressure and the ossification is less advanced than normal. The neck is often twisted anteriorly. The capsule is thickened, elongated and stretched across the acetabulum to accompany the displaced head. Often there is a definite hour glass constriction in the capsule between the head and the acetabulum. The ligamentum teres is usually present at birth but absent after the fifth year. The long muscles of the thigh are shortened while those running from the pelvis to the trochanter are usually lengthened and changed in direction.

Clinically there is marked lumbar lordosis and in the unilateral cases there is shortening of one to two inches. The patient walks with a decided limp, the body lunging towards the affected side when weight is borne on this side. In bilateral cases the shortening is about equal and is not apparent, but the bilateral dip or lunge is present and causes a marked waddle in walking. On physical examination the trochanter is prominent and higher and more posterior than normal. The head of the femur is not found in the acetabulum but can be palpated in its abnormal position, usually on the posterior surface of the ilium. The hip is freely movable in all directions except abduction and external rotations, which are limited. Telescoping of the hip is present, that is the leg can be pulled down or pushed up on the pelvis for a short distance. The Trendelenberg sign is positive. The X-ray shows the position of the head and when carefully taken is useful in determining the amount of torsion in the neck.

Once the diagnosis is made in a child reduction is indicated. The reduction is best done in the period from two to four years of age because younger children tend to soil the casts necessitating frequent changes of apparatus and in them the tissues are lax and the head is apt to slip out. After four years the reduction becomes progressively more difficult.

Reduction may be accomplished by open operation or by manipulation. In the manipulation in some clinics mechanical appliances are used to stretch the shortened muscles and to lever the head over the brim of the acetabu-

lum. There are a number of methods of manipulation, all of which may be classed as modifications of the Lorenz technique. Among them may be mentioned the methods of Lorenz, Lovett, Ridlon, Davis, Hoffa, Calot, and Denucé. All of them are successful in skilled hands. It is not so much a question of method as it is of skill in the application of the method used.

The open reduction is now being used as a routine procedure even in young children in some clinics. Personally, I believe that in children it should be used only as a last resort after manipulation has failed. It is as a rule successful but incurs an added operative risk and I am not sure but that a stiff hip is more likely to follow an open operation than after a closed reduction.

After reduction it is necessary to retain the hip in the acetabulum in a position of stability until readjustment of the tissues has taken place and then function is gradually restored. This after treatment usually consists of fixation in plaster in an abducted position for six to eight months followed by a like period of exercises and weight bearing under supervision, the after treatment being fully as important as is the primary reduction.

In certain instances the hip slips out again when fixation is discontinued. This may be due to a very shallow acetabulum or to extreme anteversion of the neck. These defects when diagnosed can be corrected by operation. The shallow acetabulum is best treated by constructing a shelf of bone along its upper and posterior border and the anteversion is corrected by an osteotomy of the shaft of the femur with outward rotation of the lower fragment.

The prognosis for a stable, useful hip with a wide range of motion is good in children. In certain instances even in young children hips are encountered which are very difficult to reduce or to retain in the acetabulum, but at the present time for children under three years of age from 60 to 75 per cent. of the cases can be cured. In older children the percentage of cures is less and in adults it is unusual that a reduction is even attempted unless the patient is having considerable pain and disability. Then it is done by open operation and preferably in two stages. The first operation consists of the application of ice tongs as a Steinman pin to the femur and is followed by strong skeletal traction. After the head has been pulled down to the level of the acetabulum an open reduction is performed. If when the head is placed in the acetabulum the hip is unstable and the head slips out easily the surgeon may construct a new roof to the acetabulum by turning down a

portion of the outer table of the ilium or by implanting an autogenous graft from the tibia. In most instances, however, it is better to combine the open reduction with an arthrodesis and attempt to obtain bony ankylosis in good functional position. In these neglected cases of congenital dislocation which have been permitted to reach adolescence or adult life without treatment, the orthopedist is as a rule well pleased if he can give the patient a hip which is in good position and painless on weight bearing, even though the range of motion may be markedly limited. Of course in bilateral cases the problem is a very different one, and a considerable range of motion in at least one hip is of prime importance. The necessity of early diagnosis and skillful treatment in these cases is obvious.

The Shriners Hospital for Crippled Children.

PELVIC CHANGES OF QUADRUPEDAL MAMMALS ON ASSUMING THE ERECT POSTURE*

FRANK HINCHEY, M. D.,

ST. LOUIS, MO.

This paper comprises an endeavor to determine the changes in the pelvis of a quadruped mammal on assuming the erect posture of man and also how such changes may have been produced.

We believe the pelvis of the quadruped is stable and well adapted to its uses, while that of man has perhaps not yet fully attained the modifications necessary for all its purposes. If we can determine how the pelvis of man has been evolved we may then hope that some solution may be given to the puzzling query of why the delivery of the fetus in the human is so commonly a pathological act—an act productive of serious lesions.

In our discussion we study the pelvis of the more common types of quadrupedal mammals because the human pelvis is apparently a modification of the quadrupedal type. Both are very similar in structure, equipped with analogous muscles, nerves and blood supply, so that all argument of the derivation of one from the other seems superfluous. And especially is this true if we can account for the points where-at they are dissimilar.

But we do not wish to be understood as assuming that man has ascended from any prevailing type or species of mammal, or quadruped, for we prefer to agree with the more recent theory of F. Wood Jones ("Arboreal man"), who traces man's ancestry to a four-

limbed reptile. From this reptilian ancestor, he asserts, proceeded the mammals, which in turn developed along two strains, one of them producing the purely terrestrial type, the other the arboreal type of mammal.

Let us first consider some of the characteristics of the pelvis of the quadruped or pronograde mammal, together with the adaptation of such a pelvis to the habits of the animal; subsequently we will consider the changes which we believe to have resulted in producing the human type.

THE SKELETON OF QUADRUPEDS

The common type of quadrupedal mammal has the horizontal vertebral column, supported by four limbs, and has the antero-posterior, i. e., vertical diameter of the body cavity greater than the transverse. The greater part of the body weight is borne by the anterior limbs and the center of gravity falls between the anterior limbs and the middle of the body cavity. The anterior limbs are never attached by bony processes to the spinal column, but the muscles which particularly encircle the trunk (the serratus chiefly) are attached to a scapula which articulates with the fore limb. When the animal has much freedom of action in the anterior limb, a clavicle aids the attachment of those limbs to the body or trunk.

It must be particularly emphasized that in a general way the posterior limb is solely the organ of propulsion, the anterior limb aiding by supporting the anterior part of the trunk and, perhaps in very violent action, affording some aid to the propulsive efforts of the posterior limbs. Motion is effected by this propulsive force or thrust proceeding from the posterior limbs and, passing through the pelvis, forward and upward, along the line of the suspended vertebral column, is received by the anterior limbs, which have only a muscular and ligamentary attachment to the trunk so that jarring or violent rebound is prevented. This forward thrust by the posterior limbs is delivered through a system of levers, of which we shall speak further, so that again all jarring is prevented when the hind feet strike the ground.

The pelvis is attached to the spine as in man, through the interposition of a sacrum. The general direction of this pelvic cavity is horizontal, with the greater diameter extending from the symphysis pubis to the posterior pelvic wall, that is, the antero-posterior diameter. The sacrum lies far in advance of the symphysis pubis so that the plane of the pelvic inlet is perhaps often more than 45° in some animals (the elephant). The roof of this cavity is formed by the sacrum and the mov-

*Read before St. Louis Medical Society, Oct. 21, 1924.

able coccygeal vertebræ. The flood is composed of the symphysis of the pubis and ischium, extending quite far posteriorly and ending in the broadened, powerful tuberosities of the ischia. The posterior outlet is directed at right angles to the horizontal spine.

The attachment of the posterior limbs has so much bearing upon the structure of the pelvis that a few words must be devoted to its description. In the anterior limb the bones are articulated to each other in a rather perpendicular line, with the exception of the humerus. This bone extends obliquely forward and upward from its attachment to the forearm to its articulation with the scapula, which bone lies along the lateral wall of the chest cavity, not the posterior, as in man. Such obliquity of the humerus is maintained by muscles, which by their varied action prevent jarring which would occur if all bones were articulated in a vertical line. In the posterior limb we find the protection more highly developed, because the bones are all articulated at sharp angles to each other. Thus, when the posterior limb is flexed, we find the three large bones, together with the sacrum, making a crude letter W, if we turn that character upon its side. It is this zigzag relation of the bones of the posterior limb which permits the attachment of muscles to produce powerful levers. This lever action we believe produces the forward thrust, of which we spoke and which we regard as the essential difference between the locomotion of man and other mammals.

It may be of interest to observe that in animals, such as the elephant, in which speed is not the chief mode of defense, the bones of the posterior limb form angles much less acute and the flair of the iliac bones, to our mind, assumes more the characteristic of man, a point to which we shall return.

The pelvic cavity is composed of the sacrum and coxæ and its axis is, roughly speaking, parallel to the axis of the vertebral column. The articulation of the iliac bones with the sacrum is much less extensive than in man, as usually only one or two vertebral segments of the sacrum articulate with the coxæ, while in man three segments always articulate; and we find this bone comparatively much broader and possessed of much longer and wider articulating surfaces.

The coccygeal vertebrae in all quadrupedal mammals are well developed and may be moved in all directions, subject to the volition of the animal.

The pelvic floor is long and formed by the junction of the pubic and ischiadic bones. The union is very strong and often ossified in ma-

ture specimens. There is, posteriorly, an ischiadic arch which is very poorly developed when compared with the pubic arch in man. We do not consider it functionally comparable to that structure.

THE MUSCULATURE OF THE QUADRUPED PELVIS

The muscles of the quadruped are so analogous to the human type that only a few require special attention and with these we will deal as briefly as possible.

In the quadruped the posterior limb is the chief organ of propulsion, as we have stated, and is fixed to the trunk in the most stable manner. The articulation of femur to pelvis permits of much less mobility in every direction than obtains in the human. This is effected by the very short neck of the femur in quadrupeds and by accessory ligaments which (in several types) further restrict motion of the femur head in the more shallow cotyloid cavity.

This restriction of the range of movement permits a concentration of energy upon the chief functions of the limb, i.e., extension and flexion. Both these functions are admirably attained through the lever action of the powerful muscles attached to the limb bones, which are articulated with each other at rather acute angles, as has been previously noted. The powerful action of the extensors, with the hoof or foot as the fulcrum, is received by the arch of the pelvic bone, the bases of the arch being the spinal articulation at one end and the very long, strong symphysis of the pubis and ischium at the other end. In particular this symphysis is broad, long and strong that the full force of the thrust be well borne. We must remember that in jumping or wide leaping the quadruped gets all the power from the posterior limbs and by a quick movement on alighting, the same limbs receive the greater weight. In like manner because of the attachment of the flexor muscles to the tuberosity of the ischium, the powerful actions of these flexors demand support, or fixation of the greatest stability, in the symphysis of the pubis and ischium.

Again this stability of the posterior limb is enhanced by the attachment of the adductor muscles. In quadrupeds these muscles are short, thick and very powerful, chiefly because of the direction of their fibres. From this very broad surface, formed by the juncture of pubis and symphysis just mentioned, these muscles pass outward to the shaft of the femur. The direction of this bone in the quadruped and its shortness permit the attachment of the adductor muscles at a much more advantageous angle than in man.

In speaking of the quadrupedal pelvis noth-

ing was said of the flair of the ilium as a special human trait, for the reason that we are extremely doubtful of the correctness of the usual interpretation of this character. Commonly ascribed to the function of visceral support in man, we rather regard it as due to the need of great bony attachment of the glutei and iliacus muscles, and to the great increase in the transverse diameter of the trunk in man. Both these traits are dependent upon an orthograde posture. We believe the need of broad muscular attachment is of the first importance. In birds, the innominate bones are developed to a comparatively greater degree than in man, yet they support no viscera in the sense we are considering; in the elephant we have noted the great development of the flair of the ilium in particular, where the body of this bone assumes an angle of about 90° with the internal lateral wall of the pelvis while in man it is no greater. Yet in this animal, as in other quadrupeds, it can have no function of visceral support as it is commonly believed to have in man.

Of the remaining muscles altered in function by the orthograde posture we will speak subsequently.

THE ORTHOGRADE POSTURE

Bearing the foregoing statements in mind, let us see what has occurred in development of an orthograde habit. We compare only end results and it is hardly necessary to emphasize the fact that all changes have been very gradual, so very slow that though developing through countless eons of time the process is yet apparently far from perfect or we would not regard repair of the female perineum as the most common of surgical operations, one that is performed thousands of times every day, all over the civilized world where babies are in vogue.

The magnitude of such a wonder feat in nature's work becomes the more astounding when we consider the paradoxical nature of the work. In the upright posture nature must needs make a pelvic floor to sustain the viscera in order that the individual may live, yet must not make a pelvic floor that the race may live! Then again, the very nature of the attempt exposes the most vulnerable regions of the animal to every assault when an erect posture is attempted. Thus the unprotected abdominal viscera, the vulnerable throat, the great vessels of the limbs, are all easily accessible in frontal attacks of the erect mammal while well guarded by the bony skeleton in the quadrupedal posture.

FACTORS IN THE PELVIC CHANGES

We believe that the alterations of the quad-

rupedal pelvis necessary to produce the human type have been due chiefly to two factors, one, the change in the center of gravity; the other, the change in the mode of locomotion. These are fundamental factors. Let us see how they have operated. The entire trunk in the human type is now borne by the posterior limbs and the center of gravity must fall within this base of support. Locomotion is more simple, being effected by leaning the trunk in the desired direction thus displacing the center of gravity; then the supporting limbs are moved on the heads of the femora. There is no thrust of the trunk, as in the quadruped, but rather a nicely adjusted balancing of the entire body weight. Jarring is avoided chiefly through the action of the calf muscles and by the intervertebral discs. With the elimination of the

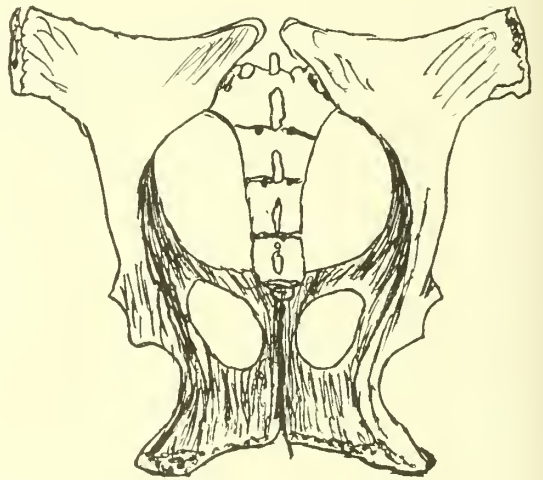


Fig. 1. Pelvis of mare. "Posterior" view. The dark median line marks the symphysis, which eventually becomes the analogue of the human pelvic arch of the pubis.

quadrupedal thrust mode of locomotion there is no need for the acute, angular arrangement of the limb bones, hence they lengthen to increase the stride and thus compensate for the loss of striding distance in the change from four to two legs. With this elevation of the trunk the center of gravity (of the trunk) is further removed from the base of support and greater becomes the demand for a widening of this base which is effected by lengthening of the necks of the femurs and widening of the entire pelvis. The glutei and iliacus muscles are enlarging in response to the increasing demands made upon them, to steady the great weight upon the heads of the femurs, and these demands can only be satisfied by broadening and extending their bony origins, hence the great iliac flair. Prior to these changes the anterior part of the trunk has been altered by the fact that arboreal habits (as shown by

F. Wood Jones) have freed the anterior limbs from the service of supporting the trunk. With such freedom and newly acquired functions the clavicles develop extensively, the scapulae pass posteriorly and the transverse diameter of the chest begins to exceed the antero-posterior, the reverse of the quadrupedal type.

In further response to the demands of the center of gravity upon a limited base of support, the condyles at the posterior part of the heavy head move forward towards the center of that structure, to maintain an easier balance on the vertebral column. The changed functions of the back muscles have altered the shape of the ribs and to favor such alteration the vertebrae have encroached upon the body cavity. The demands upon the back and lumbar muscles to maintain erection of the trunk have produced the curves in the spinal column. This hasty summary brings us to the sacrum and pelvis.

The development of the sacrum is extensive in man, its attachment to the coxae exceeding that of the elephant. Its promontory is most noted in man, all mammals, except some primates, having practically no promontory. To our mind these great differences in sacral development are due to changed function, resulting from the sustained weight passing directly through the iliac bones, as we observe in birds where the symphysis is no longer of the great value we have described in quadrupeds.

Proceeding now to the changes in the pelvic cavity, we note the marked concavity of the sacrum, continued in line by the coccygeal curve. Also the symphysis of the quadruped has been separated almost its entire length to make the pubic arch. The outlet of the cavity faces not posteriorly as in the quadruped but almost downward when man is erect, hence the viscera crowd upon each other toward the outlet, also the reverse of the quadruped.

In passing we may note the interesting fact that, as the quadrupedal pelvis passes through an arc of 90° in changing its axis from horizontal to vertical, the ischial tuberosities form the center of that arc, being retained posteriorly. The great muscles attached to the tuberosities extend to the posterior surface of the bones of the thighs, and thus prevent forward rotation of the tuberosities.

It now remains for us to describe what we regard as the factors which have effected such modifications. These factors we may consider as, first, those producing closure of the pelvic outlet so that the visceral weight may be sustained; and, second, the modifications which have permitted the exit of the fetus.

FACTORS PRODUCING SUPPORT OF VISCERA

It is well to bear in mind that nature is a wonderful economist. The most profound changes are wrought by simple changes in the adaptation of the materials at hand. The element of time alone disturbs man in endeavoring to interpret her work, while to her time has no significance. Thus in the quadruped the erector coccygeus muscles serve admirably to enlarge the posterior area of the outlet of the pelvis. In man this muscle is said to be "occasionally present" but has no function.

The demand for closure of the pelvic outlet has permitted the useless coccygeal vertebrae to diminish in size and to assume a new function (a small area, marked by a dimple or the spiral arrangement of the hairs posterior to the anus, may be noted in infants at times as marking the point of the recession of these coccygeal vertebrae). The antagonists of these erector muscles, the ischiococcygeus of quadrupeds (the coccygeus of man), pass from the sacrosciatic ligaments and the ischial spine to the sides of the coccygeal vertebrae, extending across the posterior area of the pelvic outlet, and aid in effecting pelvic closure. Their new function of support has caused their muscular structure to become largely tendinous, while the loss of former function in the coccygeal vertebrae, to which they are attached, has caused these bones to lose the well developed characters and mobility found in quadrupeds. Their new function aided by the function of the levator ani has also drawn forward the lower bones of the sacrum, producing the marked concavity of that bone as found in the human pelvis.

So much for the closure of the posterior pelvic area, so available in labor of quadrupeds. Extending forward from the anterior borders of this coccygeus muscle and blending with it we find the chief structure for closure of the anterior area. This is the famed levator ani of man and the retractor ani of quadrupeds. In the latter we find it as a relatively unimportant structure passing from the sacrosciatic ligament of the spine of the ischium backward to the sphincter of the anus. In man we find it has extended between planes of fascia which are also relatively unimportant in the quadruped but most necessary in the human. It is a tensor of these fascial planes and has reinforced them greatly for a two-fold purpose. First, as a tensor it permits the fascia to tighten and to effectively close the pelvic outlet in its anterior area; second, when relaxed, it permits the outlet to distend sufficiently to deliver the fetus. As a muscle alone it could not exert both functions and unless inserted between planes of fascia both

functions could not result. So we find it in man extending around the entire anterior area of the pelvic outlet, lying between planes of strong fascia, to meet its fellow behind the rectum as in quadrupeds and being reenforced by attachment to the coccygeal vertebræ. It is relatively absent in the median line and only by its action as a tensor of the fascia, by its antero-posterior fibres, does it maintain support in that area.

THE CHANGES IN THE MAMMALIAN SYMPHYSIS

We now come to what is perhaps the most important part of our study, the development of the anterior portion of the human pelvis.

In the human pelvis we have a very short symphysis attaching the pubic bones to each other and immediately beneath this juncture is the arch of the pubis, which extends downward and backward to the tuberosities of the ischium. This arch is made from the portions of the pubis and ischium, in the quadruped, which formed the long symphysis of that animal. In other words, the arch of the quadrupedal ischium has extended forward almost to the anterior edge of the long symphysis. This permits the development of a human pelvis, wide in its transverse diameter and with the longer neck of the femur, permits greater base for support, so that the center of gravity has a great range.

THE DEVELOPMENT OF THE PUBIC ARCH

This subject is extremely complex and perhaps can best be studied if we assume, what we regard to be a fact, that in man the keystone of the arch is the sacrum, the bases of support are the heads of the femur bones. The sacrum in man is, as we have said, very broad at its articulation with the spine and is deeply wedged between the iliac bones, where the articulating surfaces greatly exceed those formed in quadrupeds and where, posteriorly, the surfaces for ligamentous union are also extensive. Thus the weight borne by the arch is transmitted through the ilium, which is most powerfully developed near its sacral attachment, until it reaches the head of the femur. Anterior to the head of the femur the pelvic bones are lighter, and we believe that portion of the pelvis of less significance in maintaining support.

The great body weight is solely borne by the sacrum, equally transmitted to the heads of the femurs, as bases of support, so that the upward pressure of each femur is half the pressure borne by the sacrum. Such gravity force we regard as tending to produce separation of the pubic and ischiadic bones at their point of juncture, the quadrupedal symphysis,

which in turn produces great separation of the tuberosities of the ischiadic bones. These points seem not theoretical, when we observe the pelvis of birds. In birds the weight is transmitted as we have assumed to occur in man, and the pubic and ischiadic bones do not meet anteriorly. The evolutionary process has gone a step farther than in man and the pelvis and sacrum are all united by bony ankylosis to the spine.

Thus, we believe, gravity has effected the development of the pubic arch. Let us see how locomotion has perhaps aided this development.

In speaking of the musculature of the quadrupeds we emphasized the fixation of the posterior limb, saying this was essential because locomotion was produced by the forward thrust of the sacrum (and spinal column), which thrust was effected by the action of the posterior limbs. In walking each posterior limb, during extension of its bones upon each other, was alternately capable of such action upon the sacrum, largely because of the long, strong symphysis. We may compare the hollow pelvic cavity of the quadruped to a bony elliptical structure, having the head of the femur at the side of the ellipse, with the sacrum at the upper pole, the symphysis at the lower. The conditions here differ markedly from those of man. In the latter, we noted the greater development of the sacrovertebral and sacro-iliac articulating surfaces, while in the quadruped the lower or symphyseal attachment is most powerfully developed, comprising the opposing surfaces of pubis and ischium. In man locomotion depends upon a fine adjustment of balancing the weight upon the femur heads, while the weight is directly borne upon straight bones; in the quadruped locomotion depends upon a definite thrust, delivered by powerful muscles attached to bones bearing no direct body weight. It must be admitted that such a thrust demands a certain fixation, even akin to rigidity, in maintaining the upright position of the limb. That is, outward rotation of the femur shaft would nullify the work of the extension and flexor muscles. It is the reciprocal action of these flexor and extensor muscles which ultimately effect locomotion. To hold the posterior limbs from any displacement beneath the load, which can only occur in an outward or lateral direction, we find the strong adductor muscles. These muscles pass from the under surface of the symphysis and the adjacent parts of the pubis and ischium, in quadrupeds, outwardly to the shaft of the femur. In man the attachment is similar, that is, the arching rami of pubis and ischium are analogous structures. Again, such a thrust de-

mands a long, powerful symphysis in quadrupeds, to afford attachment to the great muscles passing from the tuberosities of this symphyseal juncture, which must support the weight of the body in locomotion or at rest, for as we have seen the bones being articulated angularly, cannot do so.

Thus, we believe these muscles in quadrupeds, together with the greater ligamentary fixation of the head of the femur, are responsible factors in developing the locomotive, thrusting power of the posterior limb to its full extent.

Bearing these points in mind we are in a position to admit the comparatively unimportant need for great bony development of that portion of the pelvis in man which forms the long powerful symphysis of the pubis and ischium in quadrupeds. We can see how these bony parts may have greatly lessened and have ultimately separated, when the full body weight was imposed from the sacrum to the femur heads, with the change in mode of locomotion. That is, the muscles attached to the tuberosities of the ischium and to the under surfaces of the ischium and pubis, in quadrupeds, are no longer essential factors in sustaining the weight of the posterior part of the body and delivering the thrust in locomotion. They now simply aid the glutei and iliacus muscles in balancing the body on the long straight bones of the posterior limb.

CONCLUSIONS

In conclusion, we believe the upright posture has developed a form of locomotion in man differing greatly from that of other mammals, in that the quadrupedal type depends upon a thrusting force proceeding from the posterior limbs, while in man locomotion is effected by balancing the body upon the heads of the femurs while endeavoring to broaden the base of support to accommodate the changing center of gravity. This demand for a broad base of support has produced the greater width of thorax and pelvis, which expansion has effected an increase in the size of the femur neck.

Increase in width of the pelvis has been possible by separation of the symphysis of the quadrupedal pelvis, because of the lessened function of the muscles attached to the symphysis demanding a smaller bony attachment and less powerful fixation.

All the changes of the pelvis of quadrupeds, where it differs from the pelvis of man, may perhaps be regarded as having been demanded by gravity and a new mode of locomotion.

GYNECOLOGICAL BACKACHE*

EDMUND LISSACK, M.D.

CONCORDIA, MO.

Backache is one of the commonest of all ailments of which women in indifferent health complain, and etiologically considered one of the most difficult to deal with; especially is this the case in the large class of ailments described as "functional."

The discovery that a woman complaining of backache has a retroverted uterus is no justification for attributing the pain to the displacement; the greatest harm may be done in individual cases by too readily accepting this apparently easy explanation and carrying out unsuccessfully the treatment appropriate to the displacement. Backache is not always due to pelvic disease; in fact, it is often due to some entirely different trouble.

As there are numerous causes for this ailment, its diagnostic significance in each case must be determined by careful systematic and thorough examination. It is therefore indispensable, in order to avoid pitfalls, to have the patient remove the clothing. A careful survey must be made both with the patient in the standing and in the lying positions. A routine scheme will prove most useful and if closely followed will result in a possible diagnosis by a process of elimination rather than by a process of election.

BACKACHE DUE TO EXTRA-GENITAL DISEASE

Backache is so frequent a complaint in overworked women, whether with local disease or general weakness, that it is of relatively little help in differential diagnosis. The common "fatigue backache" is seldom increased by movement, is often relieved by pressure, and is not accompanied by marked pain over the lumbar and sacral spines. A sound knowledge of the areas of referred pain is of paramount importance.

Any referred pain is of the greatest assistance in the diagnosis of persons who are otherwise in a good state of general health. However, in the case of long-standing diseases with anemia and debility, the pain tends to migrate to the corresponding area on the other side, then to associated organs, such as the uterus and breasts, and lastly to their neighboring areas.

Only too frequently does the patient await to consult the physician when the area of referred pain has become so extensive and the severity and constancy of the pain so marked, that one of the best aids to early diagnosis is

*Read at the meeting of the Lafayette County Medical Society, January 13, 1925.

no longer of avail. Any other slight trouble, such as a subcutaneous lipoma, or a decaying tooth, becomes similarly magnified until the patient becomes "an aching whole" or "a bundle of nerves." Many of these cases are labelled "neurasthenia" without a complete analysis of the condition.

The region of the sacrolumbar articulation has acted as host to the referred pain from a complexity of lesions, many of which bear no anatomic connection to the joint proper and may be classed as extrinsic. In this group will appear most of the strains, both traumatic and postural; a few of the sprains, and a lesser number of the osseous abnormalities—entities whose only similarity is expressed in the location of the pain. The intrinsic possibilities are less numerous; there have been observed spondylolisthesis, arthritis, fracture of the articular processes between the fifth lumbar vertebra and the sacrum, and strain or sprain of the intra-articular or the iliolumbar ligaments. These intrinsic lesions have been noted to exceed in incidence very markedly the affections of the sacro-iliac joints, a finding quite logically in accord with the existing anatomic possibilities in the two articulations.

In the lumbar region muscular rheumatism in the erector spinæ produce pain and tenderness in the large muscle role. The pain is usually most marked on attempted movement after a long rest, the back becoming gradually limbered up and less painful after the patient exercises a while.

Neuritis of the lumbar nerves, also noticed in this region, produces pain extending through the muscle region but the tenderness is more localized along the course of the nerves.

Among other affections producing pain in the lumbar region may be mentioned, (a) diseases of the spine affecting the bodies of the vertebræ or the posterior or lateral processes, and the tenderness will be situated accordingly; (b) diseases of distant organs leading to retroperitoneal irritation, for example, gastric and duodenal ulcer, diseases of the liver and pancreas, affections of cecum and appendix, and sigmoid and perisigmoid inflammation or cancer; (c) faulty posture, flatfoot, improper shoes, improperly fitting corsets, lordosis, enteroptosis and prominent abdomen due to deficient musculature.

In the sacral region pain is a common accompaniment of genital as well as extra-genital disease. The causes of pain in the sacro-iliac joint are, (a) relaxation, usually due to overstraining of ligaments in labor, permitting undue movement in walking and (b) arthritis, making every strain on the joint painful. The tenderness is localized to the sacro-

iliac joint on one or both sides. Chronic backache with limitation of motion, peculiar attitudes of standing, and severe pain may be due to a chronic synovitis with the formation of adhesions between the sacrum and ilia.

Rectal, bladder or ureteral disease likewise causes pain in this region.

Backache of a very troublesome form is that due to an involvement of the coccygeal region. The patient locates the pain as being very low, "at the very end of the spine." This pain is usually noticed when in the act of sitting and rising and when sitting. The former is due to movements of the affected structures by adjacent muscular action, the latter due to pressure on hypersensitive tissues about the coccyx.

Skillful modern X-ray diagnosis has thrown considerable light on the backache due to abnormalities of the spine and sacrum. These malformations occur frequently in connection with the fifth lumbar vertebra, namely, rib formations and the so-called sacralization of the fifth lumbar vertebra. In these conditions the X-ray shows abnormally large transverse processes which are irregular in shape and often impinge on the sacrum and ilium.

Toxemias (focal infections) hold a prominent place in the causation of backache. A complete mouth examination not only is necessary but is due the patient. In this connection it might be well to mention that a negative Wassermann reaction does not always prove the absence of a syphilitic infection and that some cases have responded nicely under antisyphilitic treatment.

The factors entering into the cause of backache are many and far from easily recognized and only recently another factor has been added.

The significance of "intermittent claudication" has been understood for sometime. Only recently has it been recognized that calcareous degeneration of the arteries of the feet is a cause of pain in the feet, and, recognizing this cause, many a sufferer has been relieved from the additional burden of metal arch supports and flat foot plates. The relation between arthritic spurs on the bones of the feet and calcareous arteries in the feet has thus been recognized. Bone spurs are a cause of sensitiveness to pressure and in the vicinity of joints, to movement; but the cause of the pain is due to the circulatory changes. In this same way in the back bone spurs and bridges cause sensitiveness and stiffness, but it is the circulatory changes that are responsible for the pain. Pain, then, must arise mainly from circulatory changes; changes that

give loss of expansibility and contractility, and hence to ischemia of the musculature. It has been successfully demonstrated that calcareous degeneration in both the thoracic and the abdominal aorta without other X-ray evidence of pathology of bone or joint, is a cause of backache.

BACKACHE DUE TO GENITAL DISEASE

Although retrodisplacement of the uterus causes backache frequently, it does not do so in all cases. A large number of patients have no pain in the back. An annoying backache, however, is caused by posterior parametritis. Prolapse of the uterus with cystocele and rectocele nearly always causes backache. Further genital conditions sometimes referred to as the causation of backache are uterine fibroids, salpingitis with adhesions, ovarian diseases and inflammation of the upper part of the cervix.

TREATMENT

The treatment should be detailed and sympathetic. It is (a) general, in which measures against constipation, visceroptosis, underlying complexes, wrong methods of standing and walking, gynecology, neurology and orthopedics, are considered. (b) Local. (1) For mild cases, a belt or adhesive strapping; (2) for more severe cases, a course of rest, and then a tight corset, as suggested by Dr. Lovett; (3) for severe cases, the breaking of adhesions by manipulation.

CONCLUSIONS

1. The essentials for an etiologic diagnosis in any case of backache are system and thoroughness in examination.
 2. The search for remote causes and for those of local character is of equal if not greater importance.
 3. Congenital anomalies of the lumbosacral region predispose to injury, with subsequent backache.
 4. Sacrolumbar lesions, especially intrinsic, represent the grave traumatic lesions of most common occurrence.

5. No examination of a painful back is complete and conclusive without an examination of the circulatory as well as the nervous systems.

REFERENCES

Bullard, E. A. Gynecological Backache. New York Med. Jour., 1921, Vol. 113, No. 4, pp. 142-143.

Conn, H. R. The Acute Painful Back Among Industrial Employees Alleging Compensable Injury. Jour. Am. Med. Assn., 1922, Vol. 79, No. 15, pp. 1210-1212.

Crossen, H. S. Diseases of Women, Ed. 5. St. Louis. Mosby, 1922, pp. 195-198.

Dameshek, W. Backache. Boston Med. and Surg. Jour., 1922, Vol. 187, No. 23, pp. 830-833.

Lovett, R. W. The Causes and Treatment of Chronic Backache. Jour. Am. Med. Assn., 1914, Vol. 64, No. 21, p. 1163.

Ridlon, J. and Berkheiser, E. J. Calcareous Degeneration of the Dorsal and Lumbar Aortae as a Cause of Backache. Jour. Am. Med. Assn., 1923, Vol. 80, No. 25, pp. 1831-1833.

Rosenheck, C. Backache Due to Neurological Conditions. New York Med. Jour., 1921, Vol. 113, No. 4, pp. 138-141.

Sherwood, W. A. and Jones, M. L. Backpain in the Military Service. Jour. Am. Med. Assn., 1919, Vol. 72, No. 22, pp. 1599-1604.

Smith, A. L. Etiology, Treatment and Results in 100 Cases of Backache. Nebraska State Med. Jour., 1921, Vol. 6, No. 6, pp. 179-180.

Straub, G. F. The Diagnosis of Conditions Causing Backache. Jour. Am. Med. Assn., 1923, Vol. 80, No. 10, pp. 674-678.

A NUTRITION PROBLEM WITH SPECIAL REFERENCE TO NEGRO CHILDREN*

MARY ROBERT BAYNHAM

AND

BERTHA K. WHIPPLE

Home Economics Department University of Missouri
COLUMBIA, MO.

Malnutrition has become a national menace and there is need of a nation-wide program of prevention rather than one of correction. Since remedial and corrective measures must be taken in early youth it has seemed important to make a study of conditions in the negro and white elementary schools in St. Louis; also to make a comparison of the results, (1) of health instruction in class, (2) of individual health instruction, (3) of measured feeding and corrected defects. The following table shows the results of a survey made in St. Louis in 1921-22:

TABLE 1
Tabulation of health survey made in St. Louis

	<i>weighed Children</i>	<i>No. 7% or more under wt.</i>	<i>Per cent 7% or more under wt.</i>	<i>No. 14% or more under wt.</i>	<i>Per cent 14% or more under wt.</i>
White	45,079	11,940	26.4	2602	5.7
Colored	5,274	972	18.4	228	4.3
Total ¹	50,353	12,912	25.5	2830	5.5

*This article represents the experimental section of a thesis submitted by the junior author in June, 1924, as part fulfillment of the requirements for the degree of M.A. from the University of Missouri.

1. Total figures obtained from data furnished by Division of School Hygiene. Other compilations made by author.

The accompanying chart shows the grade distribution of 2,036 pupils of the 12,122 weighed who are 10 per cent. or more underweight in 1920-21.

Table 2 shows the results of a study of the colored elementary school in Columbia in 1923-24.

The accompanying chart shows the grade distribution of 74 pupils of the 313 weighed who were 7 per cent. or more underweight.

A comparison of (1) the results of health instruction in class, of (2) individual health instruction with no defects corrected and no food given, and of (3) corrected defects and

TABLE 2
Survey of colored elementary school children in Columbia

Children Grade	Weighed No.	No. 7% or more under wt.	Per cent under wt. 7% or more	No. 14% or more under wt.	Per cent under wt. 14% or more
1	59	12	20.3	5	8.4
2	55	19	34.5	2	3.6
3	55	15	27.4	5	9.1
4	43	5	11.6	3	6.9
5	29	11	37.9	2	6.8
6	19	4	21.1	1	5.2
7	30	4	13.3	2	6.6
8	23	4	17.3	1	4.3
Total	313	74	23.6	21	6.7

TABLE 4

Gain in weight of both normal and underweight negro children as a result of health instruction in class

Grade	Number weighed	No. 7% or more under wt.	Per cent. under wt. 7% or more	under wt. No. 14% or more	14% or more Per cent. under wt.	Expected gain in 11 wks. lbs. oz.	Total gain lbs. oz.	Total variation lbs. oz.
1	59	12	20.3	5	8.4	36—1	32—3	—3—14
2	55	19	34.5	2	3.6	25—2	37—0	1—14
3	55	15	27.4	5	9.1	73—5	105—8	32—3
Total	169	46	27.2	12	7.1	134—8	174—11	40—3

Expected gain 134 lbs. 8 oz.
Total gain 174 lbs. 11 oz.
Gain above expected 40 lbs. 3 oz.
Average gain per child 16.5 oz.
Gain per child above expected 3.8 oz.

TABLE 5

Gain in weight of negro children 7 per cent. or more underweight as a result of health instruction in class

Grade	Number weighed	No. 7% or more under wt.	Per cent. under wt. 7% or more	No. 14% or more under wt.	Per cent. under wt. 14% or more	Expected gain in 11 wks. lbs. oz.	Total gain lbs. oz.	Total variation lbs. oz.
1	59	12	20.3	5	8.4	13—8	—0—15	—14—7
2	55	19	34.5	2	3.6	21—6	—26—8	—5—2
3	55	15	27.4	5	9.1	16—14	—16—8	—0—6
Total	169	46	27.2	12	7.1	51—12	42—1	—9—11

Expected gain 51 lbs. 12 oz.
Total gain 42 lbs. 1 oz.
Gain above expected —9 lbs. 11 oz.
Average gain per child 14.8 oz.
Gain per child above expected 3.3 oz.

1. Weight taken from date of beginning of class instruction. Feeding begun December 10.

TABLE 6

Gain in weight of 4 negro children given individual instruction after 11 weeks class instruction

Child	Age	Weight Nov. 1 lbs. oz.	Per cent. under wt.	Weight Apr. 15 lbs. oz.	Expected gain lbs. oz.	Total gain lbs. oz.	Total variation from expected
1	8	50—8	15	51—8	2	1—0	—1—0
2	12	68—0	5	68—2	2	0—12	—1—4
3	6	41—8	9	42—8	2	1—0	—1—0
4	9	60—0	16	51—0	2	1—0	—1—0
Total					8	3—12	—4—4

Expected gain 8 lbs. 0 oz.
Total gain 3 lbs. 12 oz.
Gain above expected —4 lbs. 4 oz.
Average gain per child —15 oz.
Gain per child above expected —17 oz.

measured feeding is shown by Tables 4, 5 and 6. The children were selected from grades 1 to 3 of the colored elementary school.

Although 27.2 per cent. of the 169 children weighed were underweight, only 7.1 per cent. were badly underweight. The gain of normal children is more rapid than the gain of underweight children. Therefore Table 4, which includes both normal and underweight, will show a greater gain than Table 5, which represents only underweight children.

Originally there were five children in the group shown in Table 6, plates 3 and 4. One child left school. These children were included in Tables 2 and 5 who received health instruction in class for a period covering eleven weeks. These five were used as a check on the children who were given a mid-morning and noonday lunch. An attempt was made to secure children alike in physical defects, state of undernourishment and about the same age. No attempt was made to correct the defects of these children, no feeding was done, but individual instruction was given. This was done at the weekly weighing period. We talked over causes for gains or losses in each individual case and suggested methods for correcting losses. The mother of each child was visited for the purpose of discussing with her the conditions found at the medical and physical examinations. Corrective means and right food and health habits were suggested.

Seven children were selected to determine the results of measured feeding and correction of defects in addition to individual and class instruction. These are shown in Table 7, plates 5, 6 and 7. These children were selected from the underweight children in Grade 1, as nearly as possible in the same physical condition as the previous group. We expected to make a study of the comparative value of milk and orange juice as a supplementary lunch. But two of the group of three who were given milk left school about a month after the feed-

ing was begun. This left only one who was physically and mentally the worst case in the whole group of seven. Therefore we do not feel that the results of this attempted experiment are of enough value to report.

Methods. The children selected for this investigation were chosen from the number of underweight children found in Grade 1 of the colored elementary school. They had had health instruction in class for eleven weeks. At the end of this period twelve of the most obvious cases of malnutrition were examined at the Boone County Hospital Clinic by Dr. R. S. Battersby. They were all 7 per cent. or more underweight and had one or more physical defects, with bad tonsils and adenoids as the most outstanding. In all cases the home conditions were bad so that ignorance and poverty were also responsible for the subnormal conditions.

The standard weight for height and age used is the commonly accepted one prepared by Dr. Thomas D. Wood.

The group of children whose weights are given in Table 7 had a noonday lunch, and a mid-morning lunch for a period of about five and one-half months. After tonsillectomy they were given one-half a bar of sweet chocolate in the mid-afternoon. This furnished carbohydrate in a readily assimilable form at the time when the physical condition of these children was at the lowest.

The meal consisted of a vegetable soup, usually made with milk, a scalloped or creamed vegetable, a pudding, stewed fruit or gelatin, milk or cocoa to drink, and either white or brown bread with butter, bringing the calories to 1000 or 1200.

Beginning with the first week of the experiment (Dec. 10) home calls were made in an attempt to secure the permission of the parents to have the tonsils removed by Dr. Guy L. Noyes, Dean of the Medical School. The aid of the principal and the grade teachers was enlisted; also that of the county nurse. But

TABLE 7

Gain in weight of 5 negro children who were given measured feeding¹

Child	Age	Weight Nov. 1 lbs. oz.	Per cent. under wt.	Weight Apr. 15 lbs. oz.	Expected gain lbs. oz.	Total gain lbs. oz.	Total variation	Remarks
1	6	36—0	14	37—0	2	1—0	1—0	No serious defects
2	7	45—0	13	50—8	2	5—8	3—8	
3	7	42—0	17	47—0	2	5—0	3—0	Defects not corrected
4	7	41—8	7	43—12	2	2—4	0—4	
5	7	41—0	18	43—8	2	2—8	0—8	
Total					10	16—4		

Expected gain	10 lbs. 0 oz.
Total gain	16 lbs. 4 oz.
Gain above expected	6 lbs. 4 oz.
Average gain per child	3 lbs. 4 oz.
Gain per child above expected.....	1 lb. 4 oz.

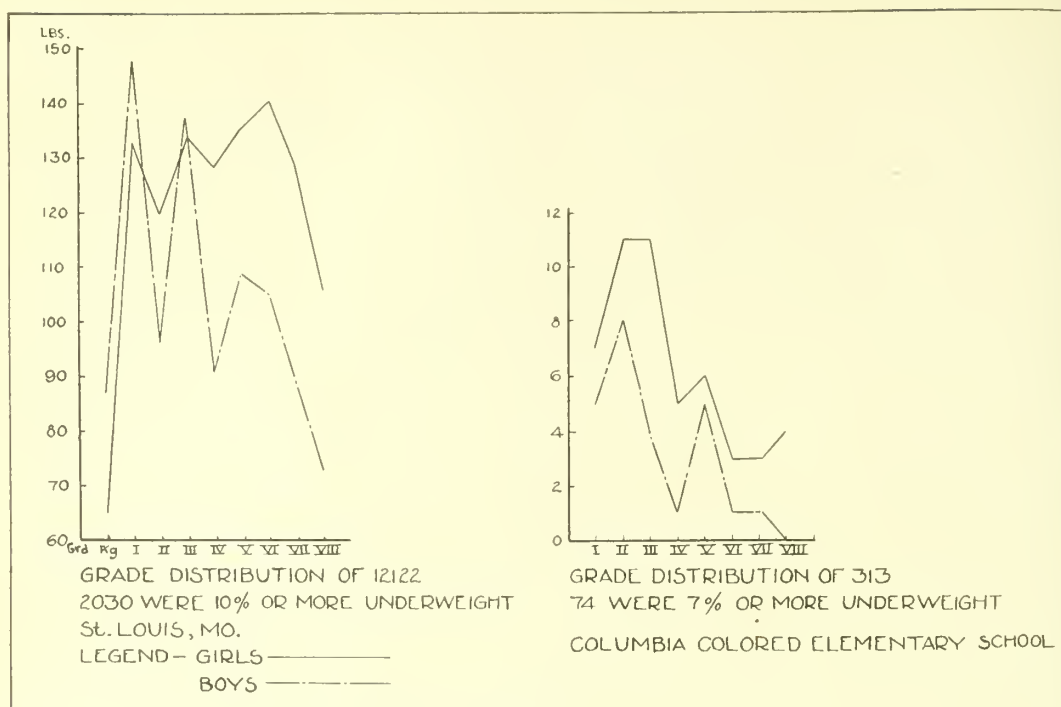


Fig. 1

in spite of numbers of calls from all these sources and a constant attempt on the part of the writer, it was February 18 before two of the children had their tonsils removed. The third child had his removed on March 10 and the fourth has never had his operation.

The parents were indifferent rather than antagonistic. From time to time, from visit to visit, they put off giving the written permission which is required by law. Several times appointments were made and when the time came to take the child to the hospital some excuse was made and he was not allowed to go. This is especially true of the child whose tonsils have not been removed.

Child 1 had bad tonsils and a slight temperature. He was considered the least promising of all the children, his home conditions were bad, his parents indifferent, and his mentality low. His physical condition was about as bad as it could be and still allow him to stay in school.

From November 11 until January 18 his weight curve remained the same. Then there was a drop of two pounds, after which his curve went up and down. Since his tonsillectomy, March 10, he has gained a pound. He feels and looks better and his teacher thinks he is brighter and more energetic.

Child 2 was more clearly a case of malnutrition from an improper diet than any of the other children. Her medical examination did not show the need of tonsillectomy. She was

a spoiled child, did not like vegetables and it was difficult to get her to take the food provided. In spite of this she shows a consistent gain.

Child 3 was very responsive. She was 17 per cent. underweight. Since the removal of her badly diseased tonsils on February 18, she has shown a steady gain. On April 15 she had gained five pounds.

Child 4 had both tonsils badly diseased and showed pronounced evidence of having had rickets. His parents were disinterested and did not see the need of an operation so they were slow to give the required permission. Two appointments were made for him at the hospital after permission was finally secured. At neither time was he allowed to go; therefore his tonsils have not been removed. Considering these adverse conditions he has gained very well physically.

Child 5 had his tonsillectomy at the same time as child 3. His history showed measles, whooping cough, smallpox, chickenpox and pneumonia. During the study he was absent several times on account of sore throat; again he was out of school a week because he swallowed a nail. His mother declared that except for this he was never sick. His home conditions were bad. The two rooms were very dirty. He was one of eight children. The mother was lazy and indifferent. This child was responsive and eager to gain but both parents delayed giving permission for the

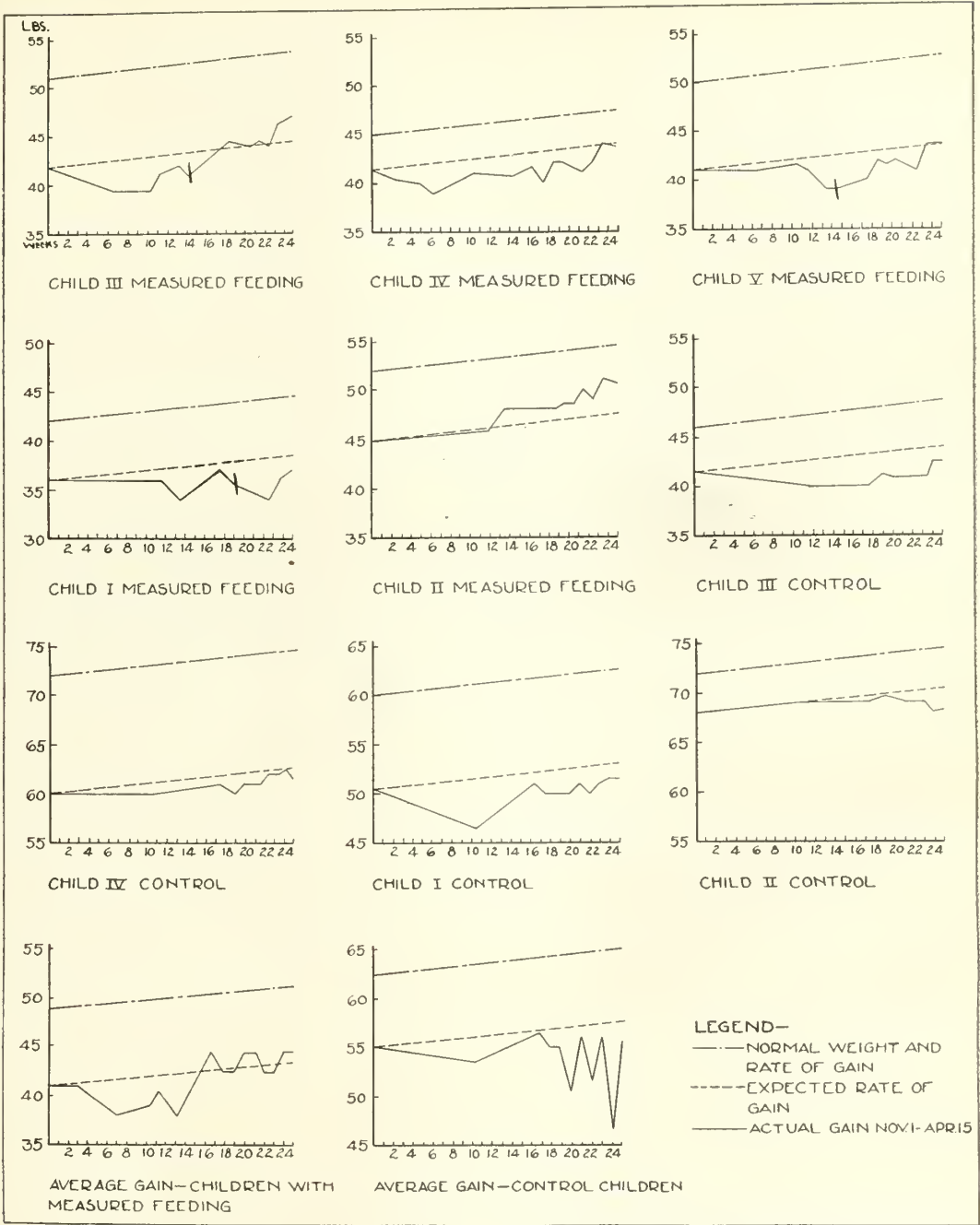


Fig. 2. Growth charts of children with measured feeding as compared with children who were not fed but given individual instruction.

tonsillectomy. At the beginning of the experiment he was 18 per cent. underweight. Later he showed the typical seasonal variation described by Porter.¹ He has reached the expected weight.

SUMMARY

1. This investigation seems to show conclusively that solving the malnutrition prob-

physician, the nutrition worker and the social service worker.

2. As a whole the negro schools do not show a high percentage of undernourished children. But there is great difficulty in getting results because many of the parents are careless, unreliable, indifferent and ignorant. Workers with these people must be patient, tireless and must expect slow results.



Fig. 3. Child IV—Measured Feeding



Fig. 4. Child IV—Measured Feeding

3. Further, this investigation indicates that gain in weight is more rapid after defects are corrected. That until corrective measures are taken even rightly chosen food cannot nourish a diseased body.

4. Tables 5 and 6 indicate that in this particular group the children given individual instruction do not show a greater gain than do the children who were given class instruction. This would seem to be due to the fact that the children given individual instruction were the most underweight and most physically defective of the class. The compilation of Table 5 includes those children who are not badly underweight. In this case the gain per child came nearer the expected gain than in the smaller group.

1. Porter, *Am. Jour. Phys.*, v. 52; p. 121.

HOSPITALS, CLINICS AND THE MEDICAL PROFESSION*

EDWIN SCHISLER, M.D.,
ST. LOUIS

Hospitals as they have been in existence since time immemorial, dating back to the time of Hippocrates, the Greek, termed the "Father of Medicine," who was born about 460 years before Christ. He was a physician-

priest of Aesculapius, as the rest of the family were before him. Hospitals were called Temples of Aesculapius and the locations were carefully chosen to get the fullest measure of sunlight, pure air, water and shelter from the cold winds. Without, were porticos which formed hospital wards, and there sick people prayed to their gods and were treated for their ailments by the priest-physician. The doctors then did not know the intricate workings of the human body; did not understand the action of the heart; the respiration of the lungs or the process of digestion. To treat diseases under these circumstances was of course practically impossible and Hippocrates studied hard and introduced a new and great system which altered these conditions greatly. When a person was ill Hippocrates carefully observed the progress of his illness. He saw that persons suffering from similar illnesses were effected in the same way, therefore, by observing the ordinary course of the disease, he was able to predict what would happen, to prepare for the stages or symptoms which were to follow, and closely observe every new feature of the disease. He made careful notes of the cases under his care and was the first physician who is known to have left records of the progress of his patients, to guide the study of those who came to him for instruction. These principles have been followed ever since and

*Read before the St. Louis Medical Society.

can only be done with that cooperation of your medical men and nurses in well regulated hospitals.

We must not think in all these years that no work or progress was being made in surgery and medicine. As early as the ninth century there are records of a famous medical school and hospital in Italy. William, of Salicet, a great Italian physician, wrote about wounds. William Harvey announced his discovery of the circulation of the blood in 1660. John Hunter paid special attention to comparative anatomy, or the structure of the bodies of various animals as compared with one another and with man. This study was very important and through it many of the great discoveries in anatomy have been made. Edward Jenner, who was one of John Hunter's pupils, discovered vaccination for smallpox. He believed that by vaccination throughout the world smallpox would be entirely stamped out of existence. At first his theory was opposed and there is still opposition by some who cannot be convinced in anything, no matter how much proof is given. News was carried throughout the civilized world only after seventy of the leading medical men of London, England, signed an article declaring their faith in vaccination after due deliberation and study. As I have said before, some people do not believe in vaccination, do not think it wise to introduce foreign matter into a well body. The medical men of today know that previous to the practice of vaccination there were epidemics of smallpox which swept away thousands of lives and made people go wild with terror. Now, no one fears smallpox and the deaths are few. Vaccination is now a rule in all city institutions and public schools the world over.

The great discoveries by Pasteur in his studies of microbes and by Lister, who studied infections, gave the world the benefits of their experience and they are still used. To these great men, our forefathers in medicine, we owe our gratitude for by their unselfish labors they made possible the progress which has been made in medicine to the present time.

Well regulated or organized hospitals are now managed under rules adopted by the minimum standard of the American College of Surgeons and are classified as Class A Hospitals. The minimum standard is as follows:

1. That physicians and surgeons privileged to practice in the hospital be organized as a definite group or staff. Such an organization has nothing to do with the question as to whether the hospital is "open" or "closed," nor need it affect the various existing types of

staff organization. The word "staff" is here defined as the group of doctors who practice in the hospital inclusive of all groups, such as the "regular staff," the "visiting staff," and the "associate staff."

2. That membership upon the staff be restricted to physicians and surgeons who are, (a) competent in their respective fields, (b) worthy in character and in matters of professional ethics; that in this latter connection the practice of the division of fees under any guise whatsoever, be prohibited.

3. That the staff, with the approval of the governing board of the hospital, adopt rules, regulations and policies that specifically provide; (a) that staff meetings be held at least once a month (in large hospitals the departments may choose to meet separately), (b) that the staff review and analyze at regular intervals the clinical experience of the staff in the various departments of the hospital, such as medicine, surgery, and obstetrics, the clinical record of patients, free and pay, to be the basis for such review and analysis.

4. That accurate and complete case records be written for all patients and filed in an accessible manner in the hospital, a complete case record being one, except in an emergency, which includes the personal history, the physical examination, with clinical, pathological, and X-ray findings when indicated; the working diagnosis; the treatment, medical and surgical; the clinical progress; the condition on discharge with final diagnosis; and, in case of death, the autopsy findings when available.

5. That clinical laboratory facilities be available for the study, diagnosis and treatment of patients, those facilities to include at least chemical, bacteriological, serological, histological, radiographic and fluoroscopic service in charge of trained technicians.

The minimum standard is in essence an arrangement by which the hospital can insure to its patients the best care known to the science of medicine. We have shown how it provides an application of the principles of scientific research to the care of the patient, the same principles which the individual doctor or surgeon uses for arriving at a diagnosis. And because medical men the country over were quick to see not only the practical but the scientific basis underlying the minimum standard they gave it in interesting numbers their unqualified support.

A decided impetus has been given to hospital standardization by the acceptance and endorsement of the minimum standard by such influential and powerful organizations as the American Hospital Association, the Canadian Medical Association, the Catholic Hospital

Association, the Conference Board of Hospitals and Homes of the Methodist Church, the Medical and Surgical section of the American Railway Association, the Methodist Hospital Association, and numerous state, provincial and local organizations.

The monthly clinical staff meeting—what is that but an opportunity to test out, or review, the data which the records and laboratories have furnished. Insistence upon competent and ethical practitioners—what is this but a guarantee that the interpreters of the facts regarding each patient are skilled medical men upon whose judgment the public has every right to rely. It is of much greater moment that the medical staff interest themselves in and aid the broad development of the hospital in order that it may advance along the proper line in the care of its patients, in the education of its personnel, and not, as is often seen, showing great indifference as to the time given to clinical lectures to nurses and nurses' attendants in the general care of the sick, and make such proper suggestions which will improve conditions and get the best possible service. This can be done by being unselfish, being prompt in your attendance and by giving your personal consideration to your fellow-men and make your hospital or institution the most refined and perfected in the community. A class A hospital under the supervision of a trained management and skilled staff, abiding by the foregoing standards and regulations, is the second home for the afflicted where quiet and adequate care can be given and the efficient care and skill of the nurses and doctors can be applied. Hospitals are not boarding houses or hotels where meals and well appointed furniture are the attractions, but the food and diet are planned by an expert dietitian who under the supervision of a trained physician outlines the food needed in the patient's particular disease. It is not a place where you bring your afternoon sewing or kill an afternoon with empty gossip, because this interferes greatly with the convalescence of your near relative or friend who should have absolute quiet and the most pleasant surroundings, which induce a quick recovery and make your hospital service less expensive.

The directors and staffs of all institutions generally invite constructive criticism in their administrations except the city institutions which are here hampered somewhat by powers or influence of those not familiar with internal needs and workings, such as laboratory, library, nurses and equipment, the social service, etc. Furthermore, it is inadvisable for the manager or superintendent to have everything in common with the treatment of patients except

only as an executive, which will be discussed later.

In the discussion of hospitals it is necessary to go into details regarding the care of the patients and management. Taking up the management, it is imperative that the superintendent or executive give that individual study of patients that is exacted from the physician in charge as to their welfare, comfort, etc., and not to interfere with rules regarding their medical care, but should see that the patient is not unduly disturbed, which can be done through the supervising nurse or executive of each department. There is need of protecting the patient from the enthusiasm of medical teachers in demonstrating or exhibiting patients before a class, larger or smaller groups in contact with sick people, either in an outpatient clinic, or hospital wards, which, although an exceptional opportunity for students, is sometimes bad for the patient and may aggravate the disease. The superintendent or manager of every hospital who is awake to his responsibility to the patients of the ward or clinic, to trustees of the institutions and to the general public, must be constantly on the alert to protect patients of the ward or clinic against this condition.

Wm. Norton, in the February *Survey*, says that grouped agencies claim that hospitals are notably large earners in comparison with other social agencies. They cater not only to the poor but to the rich and middle classes as well and are thus able to get large returns from services. Still, the earning capacities of different cities differ greatly; therefore, it would be unjust to compare a single hospital without presenting the complete hospital service of each community and comparative classifications and standards.

The first difficulty here is in the inadequacy of considering single institutions. A hospital problem is peculiarly a community-wide problem. Each community needs a certain number of free beds, or part pay beds, and as many full pay and profit earning beds as the public will patronize. It is impossible to determine these proportions with reasonable accuracy for different communities. Many hospitals can earn more by a real knowledge of costs, nurses, training schools, etc. However, the most important is the keeping of patients in institutions, such as your great City Hospital, for teaching purposes, which is only an added expense to your city. This also applies to some semicharity hospitals in which the overhead expense of their care is appalling and who are continually on the list of your public charities.

Hospitals should be more considerate of the

medical profession not members of their visiting staffs and extend the same courtesy regarding room service. This is an unfortunate position for doctors not staff members to be in, and it occurs not occasionally but too often that they are unable to get a room or hospital service. There is a trend in closed hospitals to exclude outside doctors entirely and the care and treatment of the sick is under the supervision of the head of the department, which not only is a hardship to the doctor, but invites lack of confidence from their patients, who are after all the real sufferers.

CLINICS

Clinics are now abused by the public. They were originally formed for teaching purposes, but the out-patient departments have been further developed and manned by assistants of the department of specialties and are rather an experiment shop which is not patronized by the worthy sick or poor who are deserving. All this should be stopped and clinicians, assistants, etc., should be more careful and apply such aid only to the most deserving and make your social service department so efficient that reports on patients can be had in 24 hours as to their right to receive this treatment gratis. This existing condition is of the greatest importance and the abuse should be stopped because it is not making a better public, not educating them in public health; it is simply making dependents of them and encouraging them in thriftless habits because they are getting something for nothing and works a hardship on the neighborhood doctor or family physician. If conditions now are such that Dean W. L. Niles, of Cornell, advises poor young men not to study medicine, why not create the condition under which medicine may be studied by young men of the class that as a whole have mostly ornamented the profession. Clinics then, were established for the needy, poverty-stricken sick, and for teaching material. Every physician associated with a free clinic and the profession at large is fully aware of the abuse of these departments. More care should be exercised and a thorough investigation made of every individual who applies for free treatment at the clinics or hospitals and if each patient is found worthy, a complete report with recommendations should be sent to the medical attendant; this will overcome the practice of some clinicians at the different dispensaries to have these patients report at their office for further treatment. Here your social service or special investigators should render valuable assistance by being so organized as to give you a report on your patients, either in

hospital or out-patient department, at the earliest possible moment, thereby regulating the care of real charity patients. If this abuse of charity continues, steps should be taken to have proof of all applicants applying for medical aid at the different clinics and institutions, including our city institutions, that they are in actual need. A complete report should be made by a certificate plan and then the worthy only would receive such aid, which would be real charity. Otherwise, City Ordinance No. 29,965, Section 4, making the act, "To obtain charitable assistance by false representation a misdemeanor punishable by a fine or imprisonment," should be enforced. Therefore organized medicine feels that a great injustice is being done by the different charitable organizations, clinics, hospitals, etc. By the adoption of rules for correction you will not deter the medical service but will make for a better understanding between the laity, public clinics, hospitals and the profession at large. In view of these conditions we, the Hospital Committee, offer the following recommendations:

1. That hospitals extend the same courtesy to doctors and their direct dependents regarding fees, etc., that they extend to ministers, nurses, etc.

2. Clinics connected with schools or hospitals be more diligent regarding the care of clinic patients and treat only such as are found deserving.

3. Hospitals make no contracts with firms, fraternal orders, associations, corporations, etc., without due consideration by the staff, for medical or surgical service and proper compensation.

4. There should be some agreement by your hospitals regarding interns who have been discharged for the good of the service and not be considered for appointment in other institutions.

5. Solicitation of patients or funds by circulars or advertisements or by personal communications or interviews not warranted by personal relations, is unprofessional. It is equally unprofessional to procure patients by indirection through solicitors or agents of any kind, or by indirect advertisement by the soliciting of funds either in a charitable manner or otherwise, or by furnishing or inspiring newspaper or magazine comments concerning cases in which the hospital has been or is concerned. All other like self-laudations defy the traditions and lower the tone of any hospital and so are intolerable.

CONCLUSION

It is not natural for your public to be objects of charity. One of the first laws of nature is

self-preservation and independence, which is taught in your schools, churches and your actions of every day life and handed down by your forefathers. Then why try to make dependents by forcing your different charities upon them?

944 Missouri Building.

GIGANTIC HYDRO-NEPHROSIS WITH HYDRO-URETERS, CONGENITAL

E. H. KESSLER, M.D.

ST. LOUIS

Very large ureters with the usual large kidney pelvis and calyces are seen frequently enough, occurring on one side. A careful examination will usually disclose some obstruction in the urinary tract. The obstruction may be a blind end of the ureter leading into an abnormal position, such as the rectum, or an imperforate anus. Tumors, strictures and inflammatory conditions may cause the obstruction to the flow of urine through the ureters. The obstruction can be anywhere in the urinary tract. Supernumerary kidneys with displaced dilated ureters have been found. In fact, any obstruction sufficient to hinder the flow of urine through the urinary tract will dilate the obstructed area. Proven congenital cases of hydro-ureters and hydro-nephrosis are few.

Wihlem Tinnemeyer, Aus der Pathologischen Institute, Mainz,¹ mentions Gerster's case of a horse-shoe kidney with a very large left ureter, leading into an imperforate anus.

In the same article, page 58, the postmortem of a male child thirteen days old shows large ureters with kidneys larger than normal. The ureters were the size of a lead pencil. At the entrance of the ureter into the bladder only the thinnest filiform could be passed.

1. Zeitschrift für Urologischen Chirurgie. 1922. Page 50.

Braasch, in his book, page 141, shows a plate of hydronephrosis and hydro-ureters. He says: "The dilatation is marked from the meatus to the renal pelvis. The dilatation in the pelvis is predominately in the calyces. No obstruction was found. The condition is evidently one of congenital atonic development." Braasch, page 309, mentions a congenital solitary kidney with a large ureter. I want to put on record the following case:

Master Harold M., white, male, ten years old, was admitted to the hospital on October 1, 1923. He comes from a distant city. The boy is a well formed child of normal size and his looks give the impression of a healthy child. The family history is good and



Fig. 1. The opaque solution was injected into the urinary bladder. The hips were slightly elevated and the solution filled the ureters and pelves by gravity. The flow into the bladder caused no distress and it is possible that if more solution had been used, the left kidney would show a larger pelvis.

the brothers and sisters are well. Harold weighed nine pounds at birth. He had measles and mumps in very early childhood.

About five years ago the mother noticed some pus in the boy's clothing. Shortly after this the child began to suffer with nocturia and a little later incontinence began, which was exaggerated during excitement. The child continued to look well and did not complain.

The rounds of the doctors was made without benefit. One year later the boy contracted whooping cough. The pus from the urethra became plentiful and for a time Harold seemed weak and to lose desire to play. At this time he was taken to his physician. A cystoscopic and X-ray examination was made. The diagnosis was a stone in the prostate. The plate showing the supposed stone was handed me by the father. The shadow seen is that of the child's penis.

Dr. Lund finds on cystoscopic examination, under general anesthesia, normal external genitalia, slight cystitis, no tumor or foreign body. The orifice of the ureters are wide open and would probably admit the fingers. A catheter passed freely on both sides. A free cloudy drainage was obtained which in culture showed no growth. Palpation of the prostate, with finger in the rectum, reveals nothing abnormal.

The microscopical examination of the urine shows pus four plus, mucous four plus.

The child was given urinary antiseptics and told

to report after the holidays. On February the 20, 1924, it was decided to make a pyelogram. Because of the gaping ureteral orifice the opaque solution was injected into the urinary bladder to find its way into the kidneys by gravity. Two hundred and seventy-five cc. of fifteen per cent. sodium bromide were used. Elevating the pelvis, the urinary tract was exposed for X-ray plates, with the following results:

The outline of the bladder had a serrated edge of the entire circumference, possibly due to using too little sodium bromide. The ureters were filled averaging one and one-fourth to one and one-half inches in width. The right ureter, three inches below the pelvis, shows a reduplication or folding on itself. The right kidney shows a filled pelvis and calyces the shape of a bare foot with the heel to the bottom. The heel is about three inches wide. The widest part of the foot is four and one-half inches with each calyx about one and one-fourth inches. The left kidney shows a very large pelvis with three large calyces, one of which I am unable to give the size, not being entirely filled. The pelvis is about three times the normal size. The left ureter is about one-fourth inch smaller than the right.

The child stayed in the city for pelvic lavage and urinary antiseptics. About ten days later the child developed a contagious disease, for which he was sent to the quarantine. Returning from quarantine he caught cold and developed pneumonia from which he died on the third day.

Postmortem findings: The bladder is of normal size and capacity. The ureters originate at the normal location. They are about one and one-fourth inches in diameter and the walls approximate those of the bladder in thickness. There is a short constriction near one kidney which measures one-half inch. Both ureters dilate to a funnel shape forming a large kidney pelvis. The kidney substance is about normal in amount for the age of the patient and fetal lobulation persists.

Kidney section: Fibroadenoma.

Ohio and Potomac streets.

USE OF A MEAL UNIT DIET IN DIABETES

RALPH H. MAJOR, Kansas City, Kan. (*Journal A. M. A.*, March 14, 1925), uses a very simple formula for estimating diets. The method not only permits of rapid calculation, but also allows a certain standardization of diet, which is time-saving to the dietitian while the patient is in the hospital, and also to the patient when he returns to his home. The principle of this diet is based on giving the patient 30 calories per kilogram of body weight and giving carbohydrate, protein and fat in the ration of 1: 2: 3. In making the calculation, the patient's weight in kilograms is multiplied by 30. This gives the total calories necessary for basal maintenance diet. One tenth of this amount of calories is given in carbohydrate, and a division of this figure by 4 gives the grams of carbohydrate necessary. Twice this amount is given in protein and three times this amount in fat. An example of this calculation is as follows: The patient weighs 70 kg. $70 \times 30 = 2,100$, total calories daily. $2,100 \div 10 = 210$ calories in carbohydrates. $210 \div 4 = 52$ gm. of carbohydrates. The basal maintenance diet for this patient is 52 gm. of carbohydrate, 104 gm. of protein and 156 gm. of fat, daily. A still simpler method of arriving at this calculation is to divide the weight in pounds by 3, which gives approximately the grams of carbohydrate necessary. Thus, a patient weighing 70

kg. weighs 154 pounds. Dividing 154 pounds by 3, we get 51, the grams of carbohydrate necessary. This method of calculation also permits the use to some extent of standardized diets. If the patient is taking insulin, the daily dose is divided so that the greatest amount is taken before the evening meal containing the largest quantity of carbohydrate. In case the patient is overweight, the diet is calculated for his ideal instead of for his actual weight.

A CASE OF ORBITAL LYMPHANGIOMA

The patient whose case is reported by Walter Scott Franklin and Frederick C. Cordes, San Francisco (*Journal A. M. A.*, Nov. 29, 1924), was a girl, aged 8. The condition had existed for eight years. There was marked proptosis of the left eye. The iris was atrophic, with multiple posterior synechiae. The lens showed a mature cataract. The fundus was not visible. Tension was normal. On palpation, a mass was outlined in the superior nasal portion of orbit which was fluctuant, freely movable, not attached to the globe, and not tender to pressure. The condition was diagnosed as a cyst of the left orbit. An exploratory operation was performed through a conjunctival incision. While the operator was dissecting down to the mass, there was a sudden gush of colorless fluid followed by immediate recession of the exophthalmos. An unsuccessful attempt was made to procure part of the cystic mass for diagnosis. At the time the patient was discharged, two weeks later, there was no evidence of recurrence. Two and a half months later, the patient returned with the proptosis in its former state. A Kroenlein operation was deemed advisable. Through a bow and arrow incision, about 2.5 c. back of the center canthus, the orbit was exposed in the usual manner. When the periosteum was opened, a cystic mass could be palpated at the upper nasal side of the orbit, which dissection revealed as a multilocular cyst about 2.5 cm. in length extending along the inner wall of the orbit. The cyst was carefully dissected out and the incision closed. The wound healed by primary intention, and the patient had an uneventful recovery. Microscopic examination of the tissue removed showed endothelial lined spaces coursing quite irregularly and supported on a simple fibrous tissue layer varying in thickness. The endothelium also varied considerably in thickness, and stained deeply with hematoxylin; scattered in it were numerous irregular calcified bodies, irregularly warty in outline and showing a certain amount of concentric, ringlike patterns. In many places the thickened endothelial masses showed irregular vascularization, as if undergoing degeneration. A diagnosis was made of lymphangioma, with thickening of endothelium and calcified concretions.

ACQUIRED TOLERANCE OF GONOCOCCI IN CULTURE TO MERCUROCHROME-220 SOLUBLE

Clarence C. Saehof, Chicago (*Journal A. M. A.*, April 25, 1925), found that the lethal dose of mercurochrome-220 soluble for the strains of gonococcus used increases after cultivation of the gonococcus on a medium containing mercurochrome. Consequently, acquired tolerance of the gonococcus for mercurochrome was demonstrated in the test tube.

THE JOURNAL

OF THE

Missouri State Medical Association

AUGUST, 1925

EDITORIALS

FIRST MEETING OF CAMPAIGN FOR PUBLIC HEALTH EDUCATION

The first meeting of the campaign to carry a message on public health to the people of the state was held at Rolla, July 24. Governor Baker was the principal speaker on the program and heartily approved the plan of the Association in a speech in which he paid a tribute to the medical profession for its self-sacrificing devotion to the task of eliminating sickness and of preventing disease. The State Board of Health is cooperating in this campaign and several of the members of the Board were present and addressed the audience. Among these were, Drs. Emmett P. North, President of our Association and President of the State Board of Health and James Stewart, Secretary of the Board of Health. Assistant Attorney General J. Henry Caruthers, who drew up the bill introduced in the last session of the legislature to strengthen the laws governing the practice of medicine and assisted the Board of Health in the prosecution of leaders in the diploma mill scandal also spoke.

Dr. W. H. Breuer, St. James, Councilor of the Twenty-Sixth District, opened the meeting which was attended by over four hundred people and took place in Parker Hall of the School of Mines.

Governor Baker reviewed the honorable history of the medical profession and spoke of Hippocrates, Galen and other ancients who had laid down the principles which should guide reputable physicians in their relations with the people, which still live and guide those who would practice medicine in an honorable, upright and ethical manner as distinguished from the charlatan and the quack who have no knowledge of disease and its cure but deceive the people by pretending that they do possess such knowledge.

Dr. Stewart in approving this campaign promised the full cooperation of the State Board of Health and informed the people of the work the Board of Health is doing in carrying on a campaign of education and sani-

tation in every county in the state. Particular attention was directed to the work of the Board in connection with the United States Public Health Service to cure and prevent trachoma. The Trachoma Hospital, established by the Public Health Service, is located at Rolla, where these unfortunate persons are treated and trachoma clinics are held by the Board in numerous counties. At these clinics the people are taught how to prevent trachoma and warned against permitting the disease from developing to a point where blindness follows.

Dr. North reminded the people that the laws of the state concerning the practice of medicine were very defective and that this defect was responsible for many untrained and uneducated persons obtaining the right to practice medicine. He told how our Association had tried to have this condition remedied at the last session of the legislature but that so many legislators are uninformed about the seriousness of ignorant persons practicing medicine that the bill could not be passed. It is necessary for the people themselves to be educated on matters of hygiene and sanitation so they can understand the dangers surrounding the spread of disease and how to avoid those dangers; then they will be in a position to instruct their representatives in the legislature to make laws stringent enough to keep out of the practice of medicine those who are not competent to treat people when they become sick. "Any person who attempts to practice medicine," Dr. North said, "must have a knowledge of the fundamental sciences upon which medicine is based; such as anatomy, physiology, bacteriology and pathology, hygiene and sanitation.

With a knowledge of these subjects a man is intelligent enough to know how to treat disease when it develops and how to prevent the spread of disease."

The citizens of Rolla cooperated very generously in making this meeting a most successful and interesting occasion and the newspapers in the counties of the district lent their columns to an announcement sent to them calling attention to the meeting and the objects of our Association.

Previous to the night meeting in the Parker Hall there was a meeting at 2 o'clock in the afternoon for the committee in cooperation with the Association for the Administration of Criminal Justice. Dr. A. R. McComas is Chairman of this Committee and there were over 50 physicians and laymen present. In the discussion on the probable usefulness of our committee, Dr. Bliss said he thought we could be very helpful especially in the matter

of the examination of criminals. He mentioned the work in Massachusetts where it was found that out of every 100 criminals 10 would be found insane and a general average of about 75 per cent. more or less mentally and morally defective. He advocated the establishment of institutions where a large portion of criminals could be confined and put the work under supervision of competent instructors with the view of ascertaining the mental status of those who could be later released and placed in suitable environment.

Others who spoke at this meeting were Drs. Cortez F. Enloe, Chairman of the Prison Board; W. A. Clark, former president of our Association; F. W. Gillham, Prison physician; Mr. J. M. Armstrong, member of the House of Representatives from Pulaski County.

CORNER STONE LAID FOR ST. LOUIS MEDICAL SOCIETY BUILDING

An event that will stand forever as a landmark in the medical history of St. Louis and of Missouri was the laying of the corner stone of the new building of the St. Louis Medical Society on July 16. Upon the foundation now laid will arise a building of majestic proportions and artistic design, constructed to harmonize with the dignity and honorable history of a noble profession, commodious and enduring, so that the members of the St. Louis Medical Society may, for many years to come proudly boast of a home that will be superior to any similar structure in the country.

For seventy-one years—from the date of its organization in 1835 until 1906 when an auditorium was built on ground leased from the St. Louis Medical Library—the St. Louis Medical Society was a homeless wanderer and held its meetings in various buildings not always suited to its needs because the leanness of its purse restricted its choice of accommodations. The first permanent meeting place of the society—it could not be called a home—was established when the St. Louis Medical Library Association leased a part of the ground upon which the library building rested to the St. Louis Medical Society and an auditorium was erected. There the society held its weekly meetings for a number of years but there were no facilities for committee rooms, clerical staff or other incidental work so necessary to the maintenance and progress of an organized body. After seven years of separate existence the St. Louis Medical Library Association and the St. Louis Medical Society united, the St. Louis Medical Society assuming all the obligations of the Library Association and guaranteeing the continuance of the library.

The building now being constructed will be a fire proof structure, two stories high with a basement, providing room for the medical library, the administrative offices and a meeting place in the basement to seat about 400 people. The erection of the auditorium, which will have accommodations for 1000 people, has been postponed until a later time when the necessary funds for its completion have been obtained. The cost of the present structure will be about \$175,000 and the total cost when the auditorium is built will approximate \$300,000.

The library is one of the most valuable collections of medical books in the country and contains 25,000 volumes. It was the need fully realized by all members of the society for protecting this great library from loss and damage by fire, that prompted the decision to erect this portion of the building at once because the old building is not only menaced by fire but its floors are so over-crowded that there is no more room for expansion.

Dr. Amand Ravold presided at the ceremonies when the corner stone for the building was laid, the president of the society, Dr. Fred W. Bailey, being in Europe. In a brief sketch Dr. Ravold traced the steps leading to the formation of the St. Louis Medical Library and the union of the library and the medical society and the work of collecting the money for the construction of the building. His remarks and two illustrations, one showing the exterior of the building and one taken at the time the corner stone was laid, will be found on another page of this issue.*

ATTORNEY GENERAL OTTO SUES TO CLOSE MEDICAL DIPLOMA MILLS

Permanent closure of the medical diploma mills in Missouri is the object of quo warranto suits filed in the Supreme Court by Attorney General Otto. The proceedings are instituted against the St. Louis College of Physicians and Surgeons and the Kansas City College of Medicine and Surgery. The Attorney General has specified eight charges against each of the schools and four additional charges against the Kansas City College of Medicine and Surgery.

It is charged that both schools have been guilty of serious perversion and misuse of the rights and privileges granted under their charters and have usurped powers not granted, as follows: (1) That they have failed to keep fair and intelligent records of the proceedings of the institutions; (2) that they are being maintained purely for private emolument, benefit and profit, contrary to the stipulations

*See page 326.

of the charters; (3) that they have been engaged in unlawful traffic, barter and sale of medical diplomas and certificates of graduation from high schools; (4) that the instruction offered to students in the institutions was given by incompetent persons, chiefly by students in the institutions themselves; (5) that they have been operating under their charters as scientific medical schools but are using that privilege as a mere subterfuge for private advantage and gain; (6) that they have failed to keep or maintain a proper curriculum covering four years of instruction; (7) that they have failed to provide any dispensary or hospital connection for the instruction of students; (8) that for the past three years they have failed to publish a descriptive catalog of the course of study.

In addition to the above counts against both schools the Attorney General charges that the Kansas City College of Medicine and Surgery is guilty of (1) using its charter as a benevolent institution to evade the payment of taxes; (2) that the secretary of the school, Dr. Date R. Alexander, had declared that the school would continue to be operated even if it became necessary to hire a student to attend and thus enable the institution to continue issuing "honorary degrees" as a means of profit; (3) that the degree of Doctor of Divinity had been sold and issued to persons who were not and never had been clergymen; (4) that the abuse and misuse of the rights and privileges granted the school under its charter was an unlawful usurpation of powers and privileges not granted, and was harmful and injurious to the public.

Attorney General Otto has directed Assistant Attorney General Caruthers to prosecute these cases vigorously in the Supreme Court where they will be heard at the October term.

A demurrer was filed in the Supreme Court by the St. Louis College of Physicians and Surgeons and dismissal of the charges was asked. Assistant Attorney General Caruthers then filed an application asking the Court to appoint a special commissioner to take testimony in the case of the St. Louis College of Physicians and Surgeons.

The Kansas City College of Medicine and Surgery has been granted an extension of time until August 5 to file its answer to the charges. The Attorney General will ask for a special commissioner to take testimony in that case also.

The St. Louis College of Physicians and Surgeons was organized in 1869 and graduated classes from 1870 until 1873. In 1879 it was reorganized and the charter under which it is now operating was issued. For a good

many years the school was conducted by a group of physicians who were thoroughly competent and honest in their efforts to impart instruction to students in keeping with the advances in medicine at that time. During the past twenty-five years, however, medicine has advanced so rapidly that the school was left far behind modern teaching institutions and gradually lost its standing with medical examining boards until now it is reported not recognized by forty-six states.

The Kansas City College of Medicine and Surgery was organized as an Eclectic school and obtained its charter in 1916. It is an offshoot of the Eclectic Medical University of Kansas City, Missouri, now extinct. The National Eclectic Medical Association refused to recognize the Kansas City College of Medicine and Surgery and it is not recognized by the licensing boards of forty-two states.

The evidence upon which the Attorney General based his charges against these schools was collected, in large measure, by the State Board of Health. The survey of the medical schools made by the board in 1924 disclosed very serious defects in teaching facilities, equipment and keeping records in these schools. After the exposure of the traffic in medical diplomas by the *St. Louis Star*, and the trial of persons holding licenses to practice who were charged with making false affidavits, additional evidence was procured and submitted to the Attorney General.

GRADUATE SCHOOL OF THE ST. LOUIS UNIVERSITY

St. Louis University has just published the first announcement of its Graduate School. While graduate work has hitherto been done in the university, chiefly in the schools of philosophy and medicine, the university is now initiating upon an enlarged program for graduate instruction. This is a matter of satisfaction to all who are interested in the local developments in higher education, but the readers of *THE JOURNAL* will be particularly interested in noting the increased importance which is attached to medical subjects, both clinical and fundamental.

According to the announcement, most of the scientific subjects in the School of Medicine will be hereafter acceptable not only for undergraduate medical students who are preparing for their B.S. and M.D. degrees, but also for graduate credit for those students who are preparing for their M.S. or Ph.D. degrees. This ought to achieve the purpose which the university obviously has in mind of attracting students other than prospective physicians to

the courses given at the School of Medicine. This policy should help in bringing the university as a whole and its various schools into more intimate contact with the School of Medicine. Moreover, this is the first time, as far as we know, that the fundamental staff at the School of Medicine has planned to offer for wider service the result of years of research, by organized lecture, laboratory and research courses in practically every field in the fundamental medical sciences.

The St. Louis Medical Society and other medical societies throughout the state have frequently listened to papers by staff members of the St. Louis University School of Medicine, and all of these societies no doubt will feel the gratification which we are here expressing over the determination of the university to diffuse into wider circles the influence of the men who have brought to Missouri the scientific ideals and methods of many of the older and more richly endowed medical institutions. Their courses will henceforth be opened not merely to medical students, to graduate students and to candidates for academic degrees, but also to auditors who may care to attend special lectures.

Now that the university has more definitely undertaken the task which we have long considered her duty, we hope that all of the staff members may succeed in attracting to their laboratories a considerable number of research workers for the more active prosecution of the urgent problems upon which the investigators at St. Louis University have succeeded in casting so much light.

Clinical medicine has not been neglected. The university has announced graduate instruction in four clinical departments: Internal Medicine, Ophthalmology, Otolaryngology and Urology. While it might be questioned whether these sciences should find a place in the Graduate School leading to academic degrees, still the enlightened policy followed by the university in this regard is a matter of commendation. Such subjects may be taught purely from the practitioner's viewpoint, but surely the universal reorganization of the place of fundamental science in the development of clinical medicine is rapidly approaching. Accordingly, we find in the announcement of the courses in ophthalmology, for instance, that this department will coordinate its work not merely with the departments of histology, pathology, physiology, etc., in the School of Medicine, but also with the departments of physics and mathematics in the College of Arts and Science. This arrangement should have the effect of developing scientifically trained specialists, and if the university can extend

the same policy to other divisions of its work in clinical medicine, we may be sure that this reorganization of the Graduate School will make the St. Louis University School of Medicine a still greater factor than it has been heretofore in developing proper ideals in our state. We heartily endorse the policy announced by the university that "The qualifications and previous record of the student taking these courses (in clinical medicine) as well as the nature and quality of the work done by him will determine in each instance whether or not such studies are acceptable for graduate credit towards an academic degree."

Graduate instruction in the School of Medicine is supervised by the Committee on Graduate Studies, composed of Dr. H. W. Loeb as Chairman, and Doctors Auer, Joseph, Kuntz and Neilson. That the interests of medical instruction in the reorganized Graduate School will be amply provided for is further vouched for by the fact that the regent of the School of Medicine, Dr. A. M. Schwitalla, S.J., is at the same time the acting dean of the Graduate School. Copies of the announcement and further information may be obtained by addressing the Dean, at 221 N. Grand Avenue, or at 1402 South Grand Avenue.

We wish the reorganized Graduate School, especially in its work for the development of advanced medical studies, the success which is commensurate with the excellence of its announced policies.

AMERICAN UROLOGICAL ASSOCIATION MEETING IN ST. LOUIS

The twenty-second annual meeting of the American Urological Association convened in St. Louis, May 21-23, with about three hundred members and guests registered from different parts of the United States and Canada, with the Chase Hotel as headquarters for the meeting.

The mornings of the meeting were devoted to clinics at the various hospitals by the urologists of St. Louis, which attracted large numbers of members.

The afternoons were devoted to scientific sessions, the first session being called to order by the President, Dr. Herman Kretschmer, Chicago, Thursday afternoon, at 2 p. m. The scientific session was opened with a symposium on vasotomy in which Dr. Wm. T. Belfield, Chicago, father of the operation, took a prominent part. Other contributors to this symposium were: Drs. Ben A. Thomas, Philadelphia, and Ernest G. Mark, Kansas City. Drs. Hermon C. Bumpus, Jr., of the Mayo Clinic, and Ernest M. Watson, Buffalo, read

papers on the management of bladder and prostate tumors. Dr. Nelse Ockerblad, Kansas City, read a paper on "The Value of the Creatinin Kidney Functional Test," which was well discussed. Dr. Arthur L. Chute, Boston, presented a very interesting paper in which he pointed out the importance of differentiating urinary stones from certain calcified abdominal glands.

The second afternoon session opened with the President's address. Dr. Kretschmer stressed the importance of the thorough co-operation between the urologists and other branches of medicine in order to arrive at proper diagnosis and therapy.

The scientific session of the afternoon opened with a symposium on urography in which the following read papers: Drs. Roger Graves, Boston; Wm. A. Frontz, Baltimore; Wm. E. Lower, Cleveland; Geo. W. Belcher, Cleveland; Daniel N. Eisendrath, Chicago; Irvin S. Koll, Chicago; Wm. F. Braasch, of the Mayo Clinic.

Saturday, the final day of the meeting, was taken up largely with discussions on ureteral stricture and ureteral obstructions. Among the discussors were: Drs. Guy L. Hunner, Baltimore; Geo. R. Livermore, Memphis; Irving Simons, Nashville; Joseph S. Eisenstaedt, Chicago; Robert L. McKiernan, New Brunswick, N. J.

Dr. Hugh Young, Baltimore, presented a paper on "The Problem of Sterilizing the Urinary Tract," and laid stress on mercurochrome intravenously. He reported some very startling results with its use. Other members had had less fortunate experiences and this brought about considerable interesting discussion.

Dr. Veeder Leonard, Baltimore, read a paper on "Hexylresorcinol as a Urinary Antiseptic," and reported some brilliant results with its usage. The discussion, however, brought out the fact that very few men had had satisfactory experiences with this drug. It is thought that Dr. Leonard's work on urinary antiseptics may prove a stepping stone to very important future discoveries.

The social events of the meeting are by no means to be slighted. The golf tournament at the Glen Echo Club on the first day was, of course, one of the most attractive features of the convention. Every member who played received a trophy. These were secured by local members from different St. Louis business men who donated the trophies.

Luncheons were held daily at the Chase Hotel where members and their wives gathered and had a "get-together-party."

The smoker on Thursday evening at the

Bellerive Country Club is thought to be one of the most successful smokers ever given in the history of the organization.

The annual banquet was held Friday night at the Chase Hotel and the principal speakers were: Mr. Martin Collins; Hon. Harry R. Hawes; Dr. A. G. Pohlman. At the finish of the banquet the golf trophies were awarded the smiling members who so laboriously had trampled the greens of the club in the heat of the day to receive the souvenirs offered by their St. Louis brothers.

The following officers were elected for the ensuing year: President, Dr. Clarence O'Crowley, Newark, N. J.; President-Elect, Dr. John R. Caulk, St. Louis; Secretary, Dr. Homer G. Hamer, Indianapolis; Treasurer, Dr. James B. Cross, Buffalo.

The place of the next annual meeting was not decided upon as this decision rests entirely with the Executive Committee but the impression is that Mexico City will probably be selected.

NEWS NOTES

Dr. C. H. Neilson, St. Louis, read a paper on goiter before the Pike County Medical Society meeting which was held in Louisiana in June.

Dr. Ralph M. Fellows and Dr. William W. Fellows, Salisbury, announce their association for the practice of general medicine under the firm name of Drs. Fellows and Fellows.

Dr. William J. Bryan, formerly assistant physician at State Hospital No. 1, Fulton, has been appointed superintendent of the Missouri Sanatorium for Tuberculosis, Mt. Vernon, to take the place of Dr. S. W. Weltmer resigned.

Dr. and Mrs. T. Guy Hetherlin, Louisiana, Mo., have announced the marriage of their daughter, Esther, to Dr. Russell L. Jenkins, Pittsburgh, Pa., on June 24, 1925. Dr. Jenkins has charge of the Department of Chemistry in the Mellon Institute in Pittsburgh.

An addition to the Trinity Lutheran Hospital, Kansas City (formerly the Swedish Hospital), has been planned and construction work will begin soon. The present capacity of the hospital is sixty beds which will be doubled when the new addition has been completed.

The Faculty of Medicine of the Berlin University announces the organization of facilities for giving postgraduate instruction at the Ber-

lin University beginning October, 1925. Details and programs may be obtained from the office of the International Postgraduate Courses, Berlin, N. W. 6, Luisenplatz 2-4.

The Inter-State Post Graduate Assembly of America will hold its next annual session at Saint Paul, Minn., October 12-16. More than sixty prominent physicians representing all parts of the country have accepted invitations to deliver addresses at the meeting. The secretary of the Assembly is Dr. Edwin Henes, Jr., 445 Milwaukee Street, Milwaukee, Wis.

Dr. Samuel Ellis, Lees Summit, celebrated his ninetieth birthday on July 18. He has lived in Lees Summit since 1869. He graduated from the Medical College of Ohio in 1866 and practiced at Greenup, Kentucky, until he moved to Lees Summit. He has devoted most of his time to gardening since his retirement from practice, his gardens being one of the show places of Lees Summit.

Frederick Stearns & Company, Detroit, have founded at the University of Michigan, the Frederick Kimball Stearns Memorial Fellowship in Medicine, in honor of the late Frederick Kimball Stearns.

While the medical fellowship is to be used at the direction of the University medical authorities, the work during the coming year will be devoted to researches on insulin and insulin therapy.

The American Electrotherapeutic Association will hold its 35th Annual Session September 15 to 18 at the Hotel Drake, Chicago, Ill. Papers will be read by the leading men in the field of physical therapeutics and by invited guests of national reputation. A demonstration of actual technic of application of the various physical modalities will be given. There will be a complete exhibit of the latest electrotherapeutic apparatus and accessories. Detailed program can be obtained by addressing Dr. Richard Kovacs, Secretary, 223 East 68th Street, New York City.

The American Board of Otolaryngology held an examination of applicants for a certificate from the board on May 26, 1925, at the Medico-Chirurgical Hospital, Philadelphia. The number examined at this meeting was 157 of which 137 passed while 20 failed to pass the examination. Dr. Arthur M. Alden and Dr. E. Lee Myers, St. Louis, were the only Missouri physicians who took the examination and both of them passed. The next meeting of the board will be held at the University of Illi-

nois College of Medicine, Chicago, October 19, 1925. Applicants for the examination should address the Secretary, Dr. H. W. Loeb, 1402 South Grand Avenue, St. Louis.

Dr. Herman E. Pearse, Kansas City, has been appointed City Health Director for Kansas City. One of his first important duties is to enforce the ordinance recently passed making it necessary for every person who handles foodstuff intended for public consumption to undergo a physical examination every ninety days. The ordinance provides that this examination must be made by registered physicians in good standing and a report of the examination filed with the health department. In accordance with this requirement Dr. Pearse has requested all Kansas City physicians to register with the department so that the health director may have an up-to-date list of reputable practitioners and a record of their professional status.

The gift of \$1,000,000 to Washington University by Mr. Charles Rebstock, St. Louis, will be an immense aid to the institution in enlarging its facilities and extending its usefulness in the educational field. It is planned to erect a building for biology costing \$300,000 but the remainder of the amount will be used for general endowment purposes as the university finds most useful. This gift is one of the largest the university has ever received from an individual and it differs from the usual donation of this kind in that no stipulations are attached to its expenditure. Such interest in the development of Washington University by a St. Louis citizen will be most stimulating to the students and faculty and to all concerned in the growth and management of the University.

At the Atlantic City Session of the American Medical Association a permanent Section on Radiology was established which will begin its regular sessions at the Dallas meeting in 1926. The chairman of the section is Dr. A. C. Christie, Washington, D. C.; vice-chairman, Dr. Harry Imboden, New York; secretary, Dr. M. J. Hubeny, 25 East Washington Street, Chicago. Papers on radiology have hitherto been read in the Section on Miscellaneous Topics and this year the entire program was devoted to papers on radiology. Members who are interested in radiology and desire to obtain a bound volume of the proceedings of this year's session may obtain a copy by ordering from the American Medical Association, 535 North Dearborn Street, specifying transactions of the Section on Miscellaneous Topics—Radiology—1925. The price is \$1.50 per copy.

Five fellowships in neuropsychiatry are available in the Graduate School of Medicine of the University of Pennsylvania. These fellowships have been established for the period of three years from October 12, 1925, by the Commonwealth Fund of New York.

No definite fellowship stipend has been fixed; but it will in each case approximate \$2200 per annum. The precise stipend will in each case be designated by the fellowship committee.

The minimal qualifications for applicants are: (a) age, from 25 years to 35 years inclusive; (b) graduate of a Class A medical school; (c) one year's approved internship; (d) satisfactory references; (e) approval of personal and professional status.

Applications are invited for these fellowships and should be addressed to "Dean, Graduate School of Medicine, University of Pennsylvania, Philadelphia."

Dr. William W. Graves, St. Louis, Professor and Director, Department of Mental and Nervous Diseases, St. Louis University School of Medicine, a former president of the St. Louis Medical Society, Chairman of the Section on Mental and Nervous Diseases of the American Medical Association, 1914, and Fellow of the American Association for the Advancement of Science, has received an invitation to deliver a lecture under the auspices of the William Ramsey Henderson Trust in the University of Edinburgh on Friday, October 16. The subject of the lecture will be, "The Relation of Shoulder Blade Types to Problems of Mental and Physical Adaptability." The letter explaining mutual conditions which has just been received by Dr. Graves, states that Professor Arthur Robinson, Director Department of Anatomy, University of Edinburgh, or the Rt. Hon. Lord Salvesen, P.C., K.C., one of the trustees of the Henderson Fund, will preside at the meeting.

"Organized Medicine Looking to Motorists for Revenue": Thus the *Monitor*, the daily published by the followers of Mrs. Eddy. It seems that the mouthpiece of this cult is opposed to the recommendations of the American Medical Association's Committee on Physical Standards for Drivers of Motor Vehicles. This committee urged that every person driving a motor car should be required to present evidence of good eyesight, such evidence to consist of a certificate from a reputable physician who has tested the vision of the individual. It is perhaps logical that a cult that declares that "the human mind and body are myths" should view with equanimity the ap-

palling toll of life taken by automobiles in this country. Presumably Eddyism—officially at least—does not recognize the reality of errors of refraction, yet it is not among the least amusing things in this drab world to note the number of persons in any Eddyite church who wear glasses.—*Jour. A. M. A.*, June 27, 1925.

The Fourth Annual Fall Clinics of the St. Joseph Clinical Society will be conducted at St. Joseph, Monday and Tuesday, September 28 and 29, with the Robidoux Hotel as headquarters. All branches of medicine and surgery will be represented at the meeting and the clinics will be held at the St. Joseph hospitals which are all Class A. The surgical clinics will be held in the mornings starting at 8 o'clock and the medical clinics in the afternoons starting at 2 o'clock. All visitors are requested to register at the Robidoux Hotel and receive the daily bulletin.

Following the Clinical Society meeting the Medical Society of the Missouri Valley will hold its annual meeting in St. Joseph under the auspices of the Buchanan County Medical Society, September 30 to October 2. Dry clinics will be held in the mornings and scientific papers with discussions will be heard in the afternoons. Round table discussions will be held during the noon hour. A banquet and smoker has been planned for the entertainment of the visitors.

The following articles have been accepted for New and Nonofficial Remedies:

American Chemical Laboratories
Rhus Tox. Antigen (Strickler)
Rhus Venenata Antigen (Strickler)
Britt, Loeffler & Weil
Loeblund's Malt Extract With Calcium
Loeblund's Malt Extract With Cod Liver Oil
Lederle Antitoxin Laboratories
Scarlet Fever Streptococcus Antitoxin (Unconcentrated)
Wm. S. Merrell Co.
Pituitary Extract (Obstetrical)—Merrell
Pituitary Extract (Surgical)—Merrell
H. K. Mulford Co.
Lamb's Quarters Pollen Extract—Mulford
Treatment Sets
Scarlatinal Antitoxin (Unconcentrated)—Mulford
Parke, Davis & Co.
Tuna Fish Protein Diagnostic—P. D. & Co.
Frederick Stearns & Co.
Insulin-Stearns, 80 Units, 5 Cc.
Insulin-Stearns, 80 Units, 10 Cc.
Winthrop Chemical Co.
Solarson

The United States Civil Service Commission announces the following open competitive examination for medical officers. Applications for the positions will be rated as received until December 30. The examinations are to fill vacancies in various branches of the Government Service.

For positions in the Departmental Service at Washington, D. C., the entrance salaries are: Junior medical officer, \$1,860 a year; assistant medical officer, \$2,400 a year; associate medical officer, \$3,000 a year; medical officer, \$3,800 a year; and senior medical officer, \$5,200 a year. Advancement in pay may be made without change in assignment up to \$2,400 a year for junior medical officer, \$3,000 a year for assistant medical officer, \$3,600 a year for associate medical officer, \$5,000 a year for medical officer, and \$6,000 a year for senior medical officer.

For positions in the field services appointments may be made at the salaries stated above or at higher or lower salaries, the entrance salary depending upon the qualifications of the appointee as shown in the examination and the duty to which assigned.

Competitors will not be required to report for examination at any place, but will be rated on their education, training, and experience.

Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the board of U. S. civil-service examiners at the postoffice or customhouse in any city.

Simon Guggenheim, former United States Senator from Colorado, and his wife, have announced a preliminary gift of \$3,000,000 for the endowment of the John Simon Guggenheim Memorial Foundation Fellowships for advanced study abroad.

The purposes of the Foundation are: To improve the quality of education and the practice of the arts and professions in the United States, to foster research, and to provide for the cause of better international understanding.

The Foundation is a memorial to the son of Senator and Mrs. Guggenheim, who died on April 26, 1922. The Foundation offers to young men and women world wide opportunities under the freest possible conditions to carry on advanced study and research in any field of knowledge, or opportunities for the development of unusual talent in any of the fine arts including music.

The fellowships are intended for students somewhat older than those to whom the Rhodes scholarships are open, including young

professors on sabbatical leave, holders of fellowships from individual colleges and those who have won distinction in graduate study. Only those candidates will be appointed who have embarked upon some important piece of work and who show exceptional aptitude for research, or who demonstrate ability in some one of the fine arts.

These fellowships differ from the Rhodes scholarships, furthermore, in being open to women as well as men and being available for study in any country in the world.

The amount of money available for each fellowship will be approximately \$2500 a year, but may be more or less, depending an individual needs.

While appointments will be made ordinarily for one year, plans which involve two or three years' study will also be considered and in special cases fellowships will be granted for shorter terms with appropriate stipends.

The first national awards will be made for the academic year 1926-1927. It is the purpose of the Foundation after the first year to maintain annually from forty to fifty fellows abroad. The fellowships will be open to men and women, married or unmarried, of every race, color and creed.

The executive office is at 2300 Pershing Square Building, New York. Henry Allen Moe, Secretary.

OBITUARY

NATHAN O. HARRELSON, M.D.

Dr. Nathan O. Harrelson, Kansas City, a graduate of Kansas City Medical College, 1894, died at Trinity Lutheran Hospital, Kansas City, July 2, 1925, aged 56 years.

Dr. Harrelson recently underwent an operation at Rochester, Minnesota, and shortly after returning home suffered a relapse. Upon his removal to the hospital it was decided to try blood transfusions in an effort to prolong his life and among those friends responding to the call were a number of young physicians whom he had aided in establishing their practice and who now stood ready to give of their blood that the life of their benefactor might be saved. His was a life of service to humanity and many were his deeds of charity.

Immediately upon his graduation from medical college Dr. Harrelson began practice at St. Joseph's Hospital, Kansas City, under the guidance of that venerable patriarch of Missouri medicine, the late Dr. Jefferson D. Griffith. He was a member of Jackson County Medical Society since 1908, a Fellow of the

American Medical Association, a Fellow of the American College of Surgeons and was the founder of Trinity Lutheran Hospital.

During the Spanish American War he served as Surgeon-Major in the 5th Missouri Infantry, being stationed for a time at Chickamauga, Tennessee, and also served as Major in the World War at the government hospital at Norfolk, Va.

Former classmates, professional associates and fellow officers of the Spanish American War served as honorary pall bearers, the active pall bearers being chosen from among his closest friends and physicians who had been associated with him during his thirty-one years of practice in Kansas City.

SENTER LEE GETTYS, M.D.

Dr. Senter L. Gettys, of St. Louis, a graduate of Missouri Medical College (now Washington University School of Medicine), 1895, died at St. Luke's Hospital, St. Louis, June 6, 1925, from nephritis and valvular heart trouble. He was 50 years old.

Dr. Gettys was descended from the family for which the city of Gettysburg, Pa., was named, and was a son of Wm. P. Gettys who came to St. Louis from West Virginia. He chose the role of general practitioner rather than invade the field of specialists and while enjoying the reputation of family physician he kept abreast of the advances in the science of medicine employing the most modern methods in his practice.

During his student years his diligence and geniality won the attention of his preceptor, the late Dr. William A. Hardaway, and upon his graduation he became Dr. Hardaway's assistant. He later entered independent practice wherein the kindly lessons of his former teacher and strength of character developed under his tutelage often smoothed the path that otherwise might have proved impassable.

He served as a captain in the Medical Reserve Corps during the World War, being stationed at Fort Dodge, Ia. He had been a member of St. Louis Medical Society for over fifteen years and was a Fellow of the American Medical Association.

During a vacation spent in Colorado last year he became ill from an infected tooth and had to return home. Later he suffered another illness and it is thought that he did not allow himself to recover fully from these two attacks, thereby weakening his resistance against his final illness.

Dr. Gettys was married in 1895 to Miss Augusta Bevis, who, with one daughter, survives him.

EDWARD G. ZEY, M.D.

Dr. Edward G. Zey, Butler, a graduate of St. Louis Medical College (now Washington University School of Medicine), 1894, died May 30, 1925, at St. Luke's Hospital, Kansas City, aged 54 years.

Dr. Zey was born in Cooper County, Missouri, April 12, 1871, removing to Montrose during his early childhood where he attended the public schools, later attending the University of Missouri. He was at one time assistant surgeon at the St. Louis City Hospital and later attended the universities of Germany. Upon his return he established his practice at Butler.

During his years of practice at Butler he made many friends and his constant pursuit of knowledge both in medicine and in matters of general interest won him an enviable reputation in his community. He had been a member of Bates County Medical Society since its organization but ill health recently forced him to abandon his society activities. He was a Fellow of the American Medical Association.

JOHN G. BIRCHETT, M.D.

Dr. John G. Birchett, of Cardwell, a graduate of the University of Louisville, 1884, died at St. Louis, April 18, 1925, of heart disease. He was 61 years old.

Dr. Birchett was born at Prince George, Virginia, and obtained his early education in the schools there and the high school at Richmond. After graduating from medical school he began his practice at Flagfork, Kentucky. He also practiced at Cropper and Lexington before coming to Cardwell. During the Spanish-American War he was an assistant surgeon in the United States army and served as a captain in the Medical Reserve Corps during the World War, being stationed at Camp Logan and also at Fort Riley. Dr. Birchett was a member of Dunklin County Medical Society.

F. P. BATDORF, M.D.

Dr. F. P. Batdorf, of Chillicothe, a graduate of the University of Pennsylvania School of Medicine, 1874, died at his home April 25, 1925, aged 75 years.

Dr. Batdorf was born in Jackson township, Lebanon County, Pennsylvania, September 24, 1849. After graduation from medical college he practiced a few years at Progress, Penna., then came West, settling at Farmersville, Missouri, where he remained until his removal to Chillicothe in 1923. He was a member of the Lutheran Church since early child-

hood. The doctor had spent over half a century in the practice of medicine and in that time had won many friends who regret his passing. He was a member of Livingston County Medical Society and a Fellow of the American Medical Association.

OTTO G. OETTING, M.D.

WHEREAS, It has pleased the Almighty to remove from our midst, by death, our esteemed friend and colaborer, Dr. Otto G. Oetting, who for many years occupied a prominent rank in our midst, maintaining under all circumstances a character untarnished and a reputation above reproach; therefore, be it

Resolved, That in the death of Dr. Oetting we have sustained the loss of a friend whose fellowship it was an honor and a pleasure to enjoy; that we bear willing testimony to his many virtues, to his unquestioned probity and stainless life; that we offer to his bereaved family and mourning friends, over whom sorrow has hung her sable mantle, our heartfelt condolence, and pray that Infinite Goodness may bring speedy relief to their burdened hearts and inspire them with the consolations that hope in the futurity and faith in God give even in the shadow of the tomb; and be it further

Resolved, That a copy of these resolutions be presented to the family of our deceased friend and colaborer, that a copy be spread upon our records and that a copy be sent to *The Journal of The Missouri State Medical Association* and *The Concordian* for publication.

LAFAYETTE COUNTY MEDICAL SOCIETY.

Committee: Edmund Lissack, M.D.; Ferdinand Shryman, M.D.; Fred D. Leiser, M.D.; A. J. Chalkley, M.D., President.
W. E. Koppenbrink, M.D., Secretary.

CORAY A. NICKELL, M.D.

Dr. Coray A. Nickell, Mayview, died at Research Hospital, Kansas City, Mo., March 2, 1925, from injuries received February 26. Dr. Nickell was recovering from an attack of influenza and although not feeling well he had gone to the country in response to a call to see one of his patients and on his return, while crossing the Chicago and Alton Railroad tracks at the depot at Mayview, his car was struck by the engine of a fast freight train and in some way he landed on the side of the pilot of the engine where he clung and was carried a distance of a mile before the train could be stop-

ped. He sustained injuries to his head and body and his left foot was severely mangled. Dr. Nickell was taken to his home in Mayview where his family, friends and physicians ministered to him through the night and the following morning he was taken to Research Hospital at Kansas City. He was not unconscious at any time but suffered intensely until the end.

One of the writers was with him the first night and he can truthfully say he has never seen more genuine and sincere distress or a more earnest desire to do something for the doctor than he witnessed there at Mayview—the whole community it seemed, came to the doctor's home begging to be permitted to help in some way to relieve his sufferings.

Dr. Nickell was born near Jamesport, Missouri, August 23, 1871. He was graduated in medicine from University Medical College at Kansas City in 1896 and located at Hickory where he practiced a short time, when he removed to Harwood in Vernon County. In 1904 he located at Mayview where he continued in the practice of his profession until his death.

He was married December 9, 1896, to Miss Cornelia Eckle, of Lexington, who, with two sons, Louis, of Washington, D. C., and Coray, of the home address, survives him.

He was a member of the Lafayette County Medical Society ever since locating in the county.

RESOLUTIONS

WHEREAS, While in the active discharge of his duties Dr. Coray A. Nickell, one of the members of our society, has been called from labor to eternal rest; therefore, be it

Resolved, That in the death of Dr. Nickell his family have lost a most devoted husband and father, the society a faithful member and the community in which he labored a beloved and conscientious physician; and be it further

Resolved, That we will ever bear in grateful remembrance the zeal and fidelity with which Dr. Nickell discharged his duties as a physician and will try to emulate those virtues that made him so beloved of his friends and patients; and be it further

Resolved, That a copy of these resolutions be spread upon our records, that a copy be sent to the family of our deceased member and that a copy be sent to the *Journal of The Missouri State Medical Association* and the *Higginsville Advance* for publication.

W. A. BRAECKLEIN, M.D.
C. T. RYLAND, M.D.

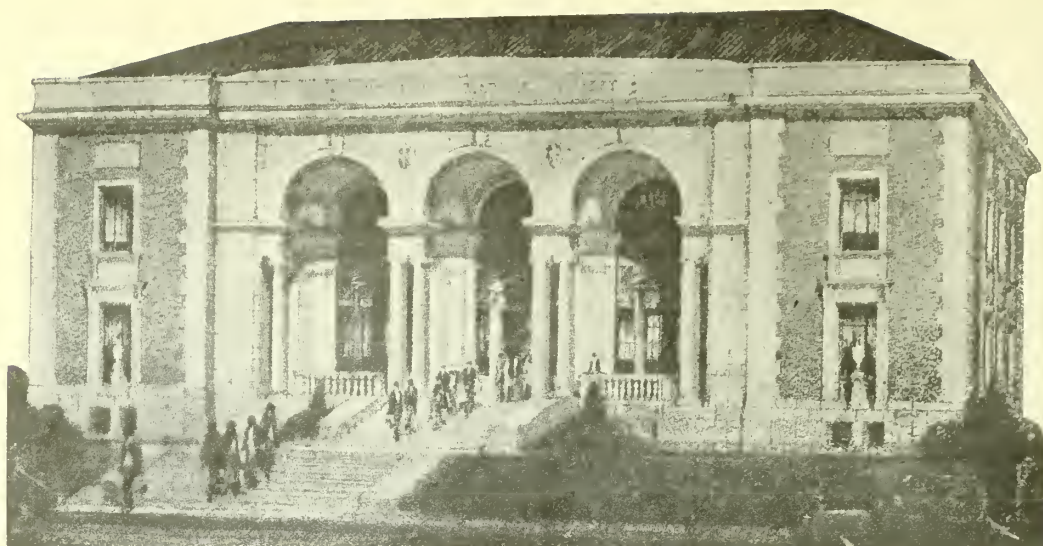


Fig. 1. New St. Louis Medical Society Building, Lindell near Vandeventer Avenue.
Albert B. Groves, Architect.

LAYING CORNER STONE OF ST. LOUIS MEDICAL SOCIETY BUILDING

At the laying of the corner stone of the St. Louis Medical Society building on July 16, the dreams of the members took form and substance. While the society has owned its home since 1916, the building which now houses the valuable medical library and the important records of the society is old and overcrowded and subject to complete destruction by fire because of its non-fireproof construction. The new building will be fireproof and provide commodious quarters for the library to expand and grow for many years to come.

In the absence of Dr. Fred W. Bailey, President of the society, who is in Europe, Dr. Amand Ravold presided at the ceremony and spoke briefly of the movement and its consummation that has resulted in the construction of the present building. He said:

REMARKS BY DR. AMAND RAVOLD

"We are assembled here today for the purpose of laying the corner stone of the new home of the St. Louis Medical Society. We believe this to be the greatest event in the history of the society, for it will not only afford a palatial, fireproof building for our priceless library, but also a commodious meeting place adequate in every way for the present and immediate future needs of the society.

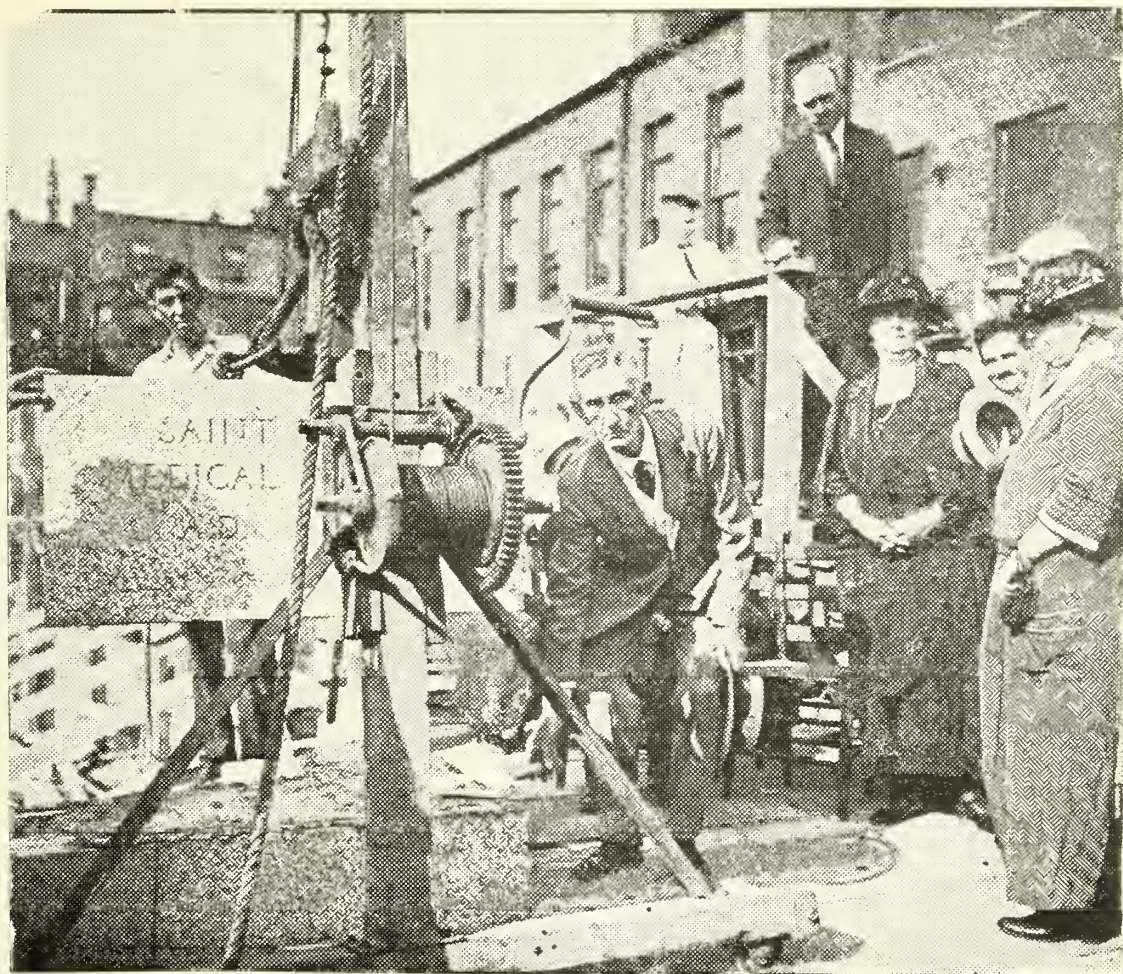
The ceremony will consist first, of a brief résumé of the history of the society. Second, the placing of a copper box containing twenty-one important documents in a crypt in the corner stone by the two oldest living former presidents of the society, Dr. Norman Bruce Carson, eighty years old, who was president of the St. Louis Medical Library Association for over fourteen years until it merged with the St. Louis Medical Society, and president of the St. Louis Medical Society in 1902, and Dr. William J. Langan who was president of the society in 1897. Dr. Langan is seventy-five years of age, is remarkably active and still enjoys a lucrative practice. Third, laying of the corner stone. Mrs. Newton R. Wilson has conferred a distinct honor upon us by coming here this hot afternoon and has graciously

consented to lay the corner stone. She will be assisted by Drs. William J. Langan, Norman B. Carson, Joseph Grindon, John C. Morfit, Robert E. Schlueter, Louis H. Behrens, Louis C. Boisliniere, Albert H. Hamel, Cyrus E. Burford, Emmett P. North, William W. Graves, William H. Vogt, former presidents of the society. This will be followed by an address and prayer by the Reverend Doctor John W. McIvor.

Previous to 1899 there was no medical library in St. Louis. In June of that year Drs. James M. Ball, Frank J. Lutz and Amand Ravold, met at the home of Dr. Ball and discussed the need of such a library.

As a result of that meeting twenty-five prominent physicians were invited to attend a meeting in the parlors of the West End Hotel for the purpose of organizing a medical library. Twenty-three men accepted the invitation, each one subscribing \$25 to the Library Association. Dr. Norman Bruce Carson was elected president and Dr. Frank J. Lutz librarian. This was an inspirational foresight for without their untiring energy, wise counsel and unusual financial ability the library would have failed and passed into oblivion. The Association rented a small room on the upper floor of the old Y. M. C. A. building on Grand and Franklin Avenues and the library was begun. A number of current medical journals in English, French and German were subscribed for, the treasured volumes of the members placed on the shelves, and a cross reference card index was started. It filled an immediate need and soon had outgrown its quarters. In a daring financial venture in 1905 the library, without funds, purchased a twelve room, three story, stone front building on a fifty-foot front lot at 3525 Pine Street, and moved in. From that time on the library grew in leaps and bounds.

The St. Louis Medical Society was organized in 1835. It had no permanent place of abode but rented quarters for its weekly meetings. In 1905 the society leased the lot in the rear of the medical library and built an auditorium upon it. It is said that propinquity makes most marriages so these two societies, living practically under one roof, became



(Courtesy of the St. Louis Globe-Democrat)

Fig. 2. Laying corner stone for new building of the St. Louis Medical Society.

Left to right: Dr. William J. Langan, wielding the trowel; Dr. Amand Ravold, Mrs. Newton R. Wilson and Mrs. Norman B. Carson.

attached to one another and finally after much parleying united in 1913. The St. Louis Medical Society assumed the debts of the library and agreed to continue it.

The new organization grew so rapidly that soon every inch of available space was filled with books and architects declare the building unfitted and unsafe for further loading. The need of the library for a fireproof building was apparent and in 1921 Dr. Emmett P. North, in his inaugural address, called the attention of the society to the immediate need of a fireproof structure for the library; however, nothing was done about it.

Dr. William W. Graves was elected to the presidency in 1922 and stressed in his inaugural address the great and immediate need of the society for a fireproof building in which to house the library. Shortly after inauguration he took hold of the subject with his usual vigor and succeeded in having resolutions adopted authorizing the construction of a new building for the society. He then appointed a lively building committee with Dr. John C. Morfit as chairman, and began search for a suitable site for the building. This lot upon which we now stand was chosen and an option obtained on it. Then the committee began soliciting funds for its

purchase. In a few weeks forty-five loyal members had subscribed \$500 each and the lot was purchased in October, 1922, for \$22,500. Careful study of the architects of St. Louis was then made by the committee and by ballot Mr. Albert B. Groves was unanimously elected. He accepted the commission and in a surprisingly short time submitted plans that met the instant approval of the committee and of the society. The plans call for two buildings, a front building of which we are laying the corner stone today, and behind it an auditorium with a seating capacity for 1000, all to cost about \$300,000.

Solicitations for the building fund then began among the members and is still going on. I was a member of the original building committee and saw Dr. Graves at work and I want now to take the opportunity to commend him for the enthusiastic optimism with which he entered whole-heartedly into the work, and for his profound faith and exalted trust in the loyalty and devotion of the members of the society. Also to Dr. John C. Morfit for his high spirit, fertile imagination and wise counsel.

Dr. William H. Vogt was elected president in 1923 and entered into the work with his calm, stimulating energy. During his administration \$23,000 was added to the building fund.

Dr. Roland Hill came into the presidency in 1924 and brought his wise knowledge of men and methods to the work. A most laborious personal solicitation of every member was inaugurated which showed that of 1100 members some 300 had not contributed to the fund. Towards the end of his term \$23,000 was raised by Dr. Hill's efforts.

We had reached an empassé. We were confronted with the fact that we could not raise further funds from the membership. We must either abandon the project or make a public drive. There was deep gloom and despair among us when suddenly, as a bolt out of a clear sky, Dr. Louis H. Behrens announced that Mrs. Newton R. Wilson desired to contribute \$50,000 as a memorial to her two deceased brothers, Dr. William Carr Glasgow and Dr. Frank Adams Glasgow, both members of the society. Dr. William Carr Glasgow was Professor of Laryngology in the Missouri Medical College for many years and Dr. Frank Glasgow was Professor of Gynecology in the St. Louis Medical College. Both were distinguished practitioners and eminently worthy of this noble memorial. I want here publicly, in behalf of the St. Louis Medical Society, to thank Mrs. Wilson for her generous contribution to the building fund, and to assure her that without her aid this building would never have been built. During Dr. Hill's administration \$75,000 was added to the fund.

Dr. Fred W. Bailey was elected president in 1925 and with his bright, youthful vigor threw himself into the work. Shortly after his term began Dr. Frederick E. Woodruff and his good wife contributed \$10,000 to the building fund and this was followed by a contribution of \$7,500 by Dr. Percy H. Swahlen as a memorial to his deceased uncle, Dr. Benjamin M. Hypes, president of the society in 1904. A number of the non-subscribing members now took heart and contributed generously to the fund and it is Dr. Bailey's aspiration to make it one hundred per cent. contribution of the membership.

In May, of this year, sufficient funds had been subscribed to warrant the construction of the library building. Bids were asked for and the Dickie Construction Company was awarded the contract on May 12. Ground was broken by Dr. Bailey on May 19, the foundation completed, and today we are laying the corner stone.

It is our earnest hope that nothing will happen to mar the steady progress of this building to its completion; that no working man will be injured or killed in its construction, and that the architect will be able to turn it over to us completed in the time specified, April 15, 1926.

On these foundation stones shall arise a majestic monument, emblematic in its serene beauty to a noble, self-sacrificing profession. May it become a concourse of worthy men and through association promote harmony, sympathy and brotherly love in the profession till time shall be no more."

In the copper box sealed in the corner stone have been deposited the following articles: (1) Constitution and By-Laws of the St. Louis Medical Society. (2) Constitution and By-Laws of the Missouri State Medical Association. (3) Constitution and By-Laws of the American Medical Association. (4) Principles of Medical Ethics of the American Medical Association. (5) Complete roster of the St. Louis Medical Society. (6) List of members and non-members of the St. Louis Medical Society who have contributed to the building fund, with amounts contributed. (7) Names of presidents, councilors and standing committees since the beginning of the building project. (8) Names of members of the Building Committee since the beginning of the pro-

ject. (9) Names of presidents of the Society since its origin. (10) Brief history of the Society by the Historian. (11) Brief history of the Library since its beginning with signatures of the present committee. (12) Bulletin clippings for the three years of the building work including minutes of official actions relating thereto. (13) Picture of the present Society building. (14) Plans and picture of the new building. (15) A recent copy of the Bulletin of the St. Louis Medical Society. (16) The Journal of the Missouri State Medical Association. (17) The Daily Bulletin of the St. Louis Clinics. (18) The Bulletin of the St. Louis University, Announcement of the School of Medicine. (19) The Bulletin of the Washington University, Catalog of the School of Medicine. (20) The daily newspapers. (21) Card of the architect.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, FOR 1925

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID THE STATE ASSESSMENT FOR ALL
THEIR MEMBERS)

- Benton County Medical Society, October 10, 1924.
- Chariton County Medical Society, December 20, 1924.
- Camden County Medical Society, December 29, 1924.
- Madison County Medical Society, January 21, 1925.
- Montgomery County Medical Society, January 22, 1925.
- Clark County Medical Society, January 30, 1925.
- Cape Girardeau County Medical Society, February 10, 1925.
- Dent County Medical Society, February 19, 1925.
- Webster County Medical Society, February 26, 1925.
- Ste. Genevieve County Medical Society, March 24, 1925.
- Ralls County Medical Society, April 2, 1925.
- Caldwell County Medical Society, April 4, 1925.
- Taney County Medical Society, April 6, 1925.
- Christian County Medical Society, April 15, 1925.
- Monroe County Medical Society, April 20, 1925.
- Cooper County Medical Society, April 28, 1925.
- Laclede County Medical Society, May 29, 1925.
- Scott County Medical Society, June 20, 1925.

WOMAN'S AUXILIARY OF THE MISSOURI STATE MEDICAL ASSOCIATION

First Annual Meeting Held at Kansas City,
May 5, 6, 7, 1925

MINUTES OF THE EXECUTIVE BOARD
Luncheon, Muehlebach Hotel Tuesday, May 5,
1925—Noon

The first feature of the First Annual Meeting of the Woman's Auxiliary was a delightful luncheon given to the Executive Board by the Jackson County Auxiliary, at the Muehlebach Hotel, Tuesday, May

5, 1925, presided over by Mrs. Robert McE. Schaufler, Kansas City, Chairman of the Jackson County Auxiliary. Following the luncheon, Mrs. Willard Bartlett, St. Louis, and Mrs. G. H. Hoxie, Kansas City, made brief talks expressing their pleasure at seeing so many of the State Board members present.

The guest of honor was Dr. John M. Dodson, Chicago, Secretary of the Bureau of Health and Public Instruction of the American Medical Association, who reviewed the history of the development of the public health movement. He emphasized the advantage the Woman's Auxiliaries have over the medical profession in bringing about better health conditions.

He spoke of the immense amount of work done by the Bureau of Health and Public Instruction to better the sanitary conditions and requirements of the rural schools. A million copies of a leaflet on this subject have been sent out by this committee which believes it has produced results, since now in thirty odd states no school board can erect a school building without the approval of the proper state officer.

Speaking of the physical condition of children, Dr. Dodson said there are one and one-half to ten times the physical defects in rural children that there are in city children which is due, of course, to better school buildings and facilities and better teaching of health principles in city schools. The minimum of physical defects admissible has been tabulated and published by the committee, and where these have been studied much advance has been shown in health conditions, even to the changing of laws to promote public health. The committee has a report called "Health Education" which should be more generally used.

There is much concrete evidence of the result of this committee's work. The slogan among educators has come to be, "Health first and most fundamental." The program of this committee has been attacked on the ground that it focuses the attention of the children on disease, but Dr. Dodson says, "On the contrary the children are not taught about disease but are taught the gospel of health."

With 90,000 doctors in the A. M. A., 160,000 teachers in the National Education Association to all of whom the question of health is fundamental, Dr. Dodson thinks they can surely reach through the children in the schools the thousands of parents in the parent teachers associations on this most vital question.

He said the greatest single avenue of approach to the public is *Hygeia*, and he told the women that the greatest bit of public health work that they can accomplish at present is to get *Hygeia* into the hands of the public school teachers.

Following the luncheon the board adjourned to the Music Room.

Afternoon Session

The afternoon session of the Executive Board was called to order by the President, Mrs. G. H. Hoxie, at 2 p. m., Tuesday, May 5, 1925, in the Music Room of the Muehlebach Hotel, Kansas City.

Members of the Board present were: Mrs. G. H. Hoxie, Kansas City, President; Mrs. Willard Bartlett, St. Louis, Chairman of Organization; Mrs. J. G. Montgomery, Kansas City, Corresponding Secretary; Mrs. A. B. McGlothlin, St. Joseph, Recording Secretary; Mrs. E. T. Gibson, Kansas City, Chairman of Education; Mrs. Guy L. Noyes, Columbia, Chairman of Publicity; Mrs. M. P. Overholser, Harrisonville, Chairman of Finance; Mrs. George E. Bellows, Kansas City, Chairman of Legislative

Committee; Mrs. C. T. Ryland, Lexington; Mrs. H. S. Conrad, St. Joseph; Mrs. H. F. Parker, Warrensburg; Mrs. Emmett P. North, St. Louis; Mrs. Frank W. Gillham, Jefferson City, Directors.

In opening the meeting, Mrs. Hoxie emphasized the necessity of proceeding properly in this meeting because it was a meeting of precedent.

It was decided that the committees and members of the Executive Board should informally discuss the work of the past year and from this discussion formulate plans for the coming year.

The Secretary's report of the St. Louis Board meeting was read and accepted.

The Corresponding Secretary made the following report:

Report of the Corresponding Secretary

Circular letters from the President and the Chairmen of Education and Legislation have been sent to every county where an Auxiliary Chairman had been named. The number of such counties crept up during the year to sixty. Letters were mailed to presidents of the Federated Clubs of Missouri (stamped addressed envelopes were furnished by the State Federation of Clubs) asking them to work for adequate appropriations for the State Board of Health; to members of the legislature; a report of the October Board meeting sent to all counties; material for vital statistics program sent to all counties; about four hundred letters sent to doctors' wives whose names had been sent in by County Chairmen. In all, about 1555 letters have been sent out. This does not include the personal letters mailed by the President and Committee Chairmen. The Officers and Committee workers outside of Kansas City have carried the correspondence work of their own departments (Mrs. Bartlett, Organization; Mrs. Graham, Hygeia; Mrs. Noyes, Publicity) and their correspondence is not included in this report.

Recommendations

The personal letter method of inter-communication between the State Auxiliary and the county units necessitates a great amount of work which is not complete in its results. It is recommended that some arrangements be made with the editor of the *Missouri State Medical Journal* whereby all reports of meetings and notices for meetings be published in the regular issues of *The Journal*, inasmuch as this will also constitute a legal record and notice of transactions.

The replies during the last year have been so few that the officers of the State Auxiliary have been handicapped in the progress of unifying the organization.

Respectfully submitted,
PEARL S. MONTGOMERY,
Corresponding Secretary.

This report brought out a discussion as to how the correspondence might be consolidated so as to eliminate much of the drudgery. Mrs. Bartlett reported that a plan was being worked out to have the clerical work of the correspondence done by the men's organization, since they are already equipped to do such work.

Mrs. Willard Bartlett, State Organizer, reported as follows:

Report of the Chairman of Organization

Many of us have met before in smaller gatherings, but today marks our first milestone and we are coming together for the first time as an established

organization, realizing that although we are in our infancy, a wide field of usefulness is open to us for the future. This first report should be comprehensive.

I shall continue from where I left off last October in the report to the Executive Board in St. Louis, which was preliminary to our organization meeting in Chicago. However, for the benefit of many who have not been in touch with us before and are not in the habit of seeing the *State Medical Journal*, it may be well to say that I was requested by the National Organization last spring to undertake the work of organizing the Woman's Auxiliary to the Missouri State Medical Association and with the approval of the President of the St. Louis Medical Society and its delegates, presented the matter to the few women attending the State meeting in Springfield on May 5, 1924, and also had the matter brought before the House of Delegates with whose indorsement the work was begun. The meeting for organization was announced and took place during the meeting of the American Medical Association in Chicago, where a number of Missouri women were assembled. The officers who have so ably served us this year were elected. In the *July Journal*, a report of the preliminary work of organization was published.

The counties now organized number sixty, twenty-eight actively functioning, with six hundred paid up members. Without the cooperation of the officers of the Missouri State Medical Association and the County Societies our task would have been quite impossible, for it has been our policy that the chairman who organized each Auxiliary should be appointed by the president of the county medical society or in some instances by the councilors or secretaries. To all of those we wish to express our thanks and appreciation. Chairmen have not been appointed in all counties but as soon as this is done we will follow up the work. Your Chairman of Organization has made a number of trips to various localities in the state to assist in the organization meetings.

Several gratifying reports have come from counties in which the men's society had ceased to meet. The women, however, by their interest had again started the men. In Gentry County six doctors had joined the county society, as their wives wished to belong to the Auxiliary. The two organizations meet at the same hour in different meeting places, as is done in many counties.

In considering the type of work we undertake and our methods of carrying it out, these must of necessity vary with conditions in each community. Our function, it would seem, is to act as an agency to stimulate other organizations already existing, utilizing them and their equipment rather than creating new work ourselves. If we are able to put into the programs of various women's clubs, churches, parent teachers associations, and the press, material that will reflect the correct information on medical subjects, we will have done much. There are in all communities such opportunities. The report that will be given later of some of the work of the Auxiliary to the St. Louis Medical Society is a point in illustration. Upon request, they assumed the responsibility of getting started in St. Louis some observance for Child Health Day, May 1, assembling representatives of all organizations interested in health work in St. Louis in the auditorium of the St. Louis Medical Society and securing the clerical service of the Community Council in sending out the call for the meeting.

A definite line of work that has been indicated

for us by the American Medical Association is that of increasing the circulation and use of *Hygeia*, which work our efficient Chairman, Mrs. E. A. Graham, has already started in the state. May I repeat what I have said before, that no matter what work of definite value the Auxiliary may accomplish, to my mind its most important sphere is that of stimulating at all times a feeling of local cooperation and the spirit of understanding. We find the recognition of this embodied in recommendations that the Speaker of the House of Delegates of the A.M.A., Doctor F. C. Warnshuis, one of the guests at last year's state meeting in Springfield, made to the Association of State Secretaries at their meeting in Chicago last fall. At that time he outlined this thought as one that should guide state associations and be stressed by them in their year's program.

Another matter that concerns our form of organization I wish to report, for which there seems a need, after close observation and thought during the past year. In certain counties the number of women eligible for the Auxiliary seems in their minds too few to form an organization, and in this statement we feel they are justified. In view of that fact we wish to propose that we amend the article on membership by the addition of a class of members to be designated under "Membership at Large." These members shall fulfil all membership requirements and pay dues of one dollar annually to the state Auxiliary treasurer. Women who are interested will be in touch with us and in turn we may have representatives in all counties.

The amount of correspondence that has been entered on my records shows from May to October, 1924, 3058 separate communications, letters, printed material sent out, and from October to May, 1925, 782 letters, making a total of 3840. I cannot dwell with much joy upon this fact except that it is in the past. As we are at this time establishing precedents, would it not be well for us to agree that as an organization we will stand for simplicity in the arrangements for our meetings and informality in our social gatherings?

We have arrived at the dignity of our first birthday, the age of our youth that does not know its own limitations and because it does not dream that it cannot succeed, it does succeed. Let us hope that in the spirit of our Association we will not let go of those lovely qualities that its youth entitles us to, simplicity and sincerity, the door-way to understanding and enthusiasm, the spark of accomplishment.

GENEVIEVE W. BARTLETT, Chairman.

Mrs. Bartlett recommended that the articles on membership be amended so as to include a class designated as "Membership at Large," this class to embrace eligible women who are located where a county auxiliary is impossible. This recommendation was referred to the Committee on Amendments to be presented at the annual meeting of the delegates. Mrs. M. P. Overholser and Mrs. Willard Bartlett were appointed as the Committee on Amendments.

Mrs. Geo. E. Bellows read the report of the Legislative Committee, which follows:

Report of the Legislative Committee

At the meeting of our State Board, October 8, 1924, it was decided that the legislative committee should be composed of one woman from each of the five largest cities of the state to work with the State Chairman, Mrs. George Gellhorn, of St. Louis. Jasper County had not organized an auxiliary but

the President appointed on the State Committee the chairmen of the Legislative Committees of the Auxiliaries of the counties in the other four large cities: Mrs. Jerome Cook, St. Louis; Mrs. R. J. Curdy, Kansas City; Mrs. H. S. Conrad, St. Joseph; Mrs. A. L. Anderson, Springfield. Upon the resignation of Mrs. Gellhorn as Chairman, Mrs. G. E. Bellows, Kansas City, was appointed Chairman.

The instructions to the committee were that it was not to take the initiative in introducing any laws; it was to be prepared to work for adequate appropriations for the State Board of Health and that any work undertaken by it was first to have the approval of the Committee on Legislation of the Missouri State Medical Association, and that it was to be ready to do anything it might be called upon to do by the State Medical Association.

These instructions have been followed to the letter. On December 29 the President received the information that the State Tax Commission had cut the appropriation asked for by the State Board of Health in such a way as to cripple for another two years the work of organizing country health units. She was advised that the most effective time for reaching the legislators and influencing them to vote for an adequate appropriation was by personal visit or telephone conversation before they left home for Jefferson City. The matter was referred to Dr. Herman E. Pearse, Chairman of Legislation of the Missouri State Medical Association who approved the suggestion and advised the Auxiliary to go to work.

Letters were sent to seventy counties, asking doctors' wives to interview the senators and representatives of their districts and to get other influential people and club representatives to do so. On December 25, Mrs. Ess, President of the Missouri Federated Clubs, on the request of our President, sent out letters to all the federated clubs of the state, asking them to do the same. Remarkably good team work in this task was done by several of our Auxiliaries, which the counties themselves will no doubt report on.

On February 2, after the Tax Commission report had been made public, letters were sent asking the Auxiliaries to follow the matter up with letters and telegrams to the members of the appropriations committees, and names of the committee were enclosed.

The President of the Auxiliary was notified by the chairman of the appropriations committee of the House of Representatives that there would be a hearing on the State Health Department appropriations, February 24 and saying that the Auxiliary would be heard.

The members of the Legislative Committee were immediately wired suggesting that members in Louis, St. Joseph, Springfield and Kansas City go to Jefferson City for this hearing. In the meantime, word was gotten to Dr. Stewart, Secretary of the State Board of Health, to notify us in case it should develop that our going to the hearing should be unnecessary. The evening of the 23d we were notified that it would not be necessary for us to appear. I am happy to be able to report that the State Health Department got a fairly adequate amount for the county health unit work.

On February 6 the Secretary of the State Medical Association wrote saying the Association would be glad to have the Auxiliary help on the medical practice act and help to have the Chiropractic Bill killed. Dr. Goodwin expressed the opinion that stereotyped letters to legislators were not very valuable, and suggested the advisability of asking the Auxiliary

members to formulate their own arguments in their letters for and against these two bills.

On February 11 letters were sent to seventy counties asking that the legislators be reached in accordance with this suggestion.

In view of the experience of this year, I would suggest that in another legislative year the county auxiliaries acquaint themselves early in the fall with the questions affecting public health which are likely to come up in the legislature, so that if we are again called upon for help we may be able to give it more generally, more quickly, and may do it in such a way as to indicate to the legislators a very widespread intelligence about the matters in question.

MRS. GEORGE E. BELLOW, Chairman.

Mrs. Bellows' recommendation met with the approval of the board.

Mrs. E. T. Gibson read the report of the Education Committee which follows:

Report of the Education Committee

In giving the report of the Education Committee for this first year of the organization perhaps it may be well to state what has seemed to us to be the function of this Committee.

Briefly, it has seemed to us that our function was to be a clearing house, to pass on to the county auxiliaries information and advice from the American Medical Association, the Missouri State Medical Association, the State Board of Health, the United States Public Health Service and any other official organizations which may have information useful for work like ours. The Education Committee may then save the county auxiliaries much work in searching out and sending for such material for themselves. Such material and advice as the state committee thus passes on to the county auxiliaries may of course be used by them at their own discretion, according to their local conditions and needs, and the judgment and wishes of the county medical society to which they are an auxiliary.

Briefly, the sum of the information and advice which we have received and passed on from these sources this year is:

Missouri's death rate is higher than it should be. A child or a man has a better chance of living if he lives in crowded New York City than if he lives in Missouri.

To remedy this condition all the organizations mentioned recommended the same solution: full-time county health departments working under an adequate State Board of Health with adequate appropriation for both. Private organizations like ours cannot hope to cope with a problem of this size and have not the authority to do so even if we had the ability and time. So the chief need in our educational work is to teach people the need of such health departments.

But our educational work even though bearing principally on this one point must be a broad one. Dr. Mountin has said that the best way to prepare people to work for a county health department, and work with it after they have it, is to educate them generally in public health.

What then are the essentials of public health that we must teach? First, that sanitation, that is, sewage disposal, both city and rural, safe water and milk supplies and fly prevention, and rural school sanitation, is the first essential of our public health work. No other endeavors can bring results until these are attended to.

Second, two diseases are absolutely preventable, smallpox and diphtheria, and we must educate to take advantage of the means of prevention.

Third, all have emphasized the importance of correct and full vital statistics. You cannot look after people's health until you know who and where the people are and what they are dying of.

Fourth, the State Board of Health is making a great endeavor to wipe out trachoma and has asked us to help by passing on information about the disease and the facilities for combating it.

This briefly is the program which we have passed on. We have also made some suggestions as to means of carrying it out. First, that we educate ourselves a little just in order to educate others better. We have suggested sources of information, pamphlets of the American Medical Association, the United States Public Health Service, etc., and in some cases on request have furnished the materials for the programs. We have also suggested that the auxiliaries try to interest other women's organizations in public health educational work and that they pass on these same authentic sources of information. We have suggested that posters in public places on elementary public health subjects form one method of spreading information. And last and most important, we have passed on information about the magazine *Hygeia* in an effort, at the direct request of the American Medical Association, to increase its subscription and get in the county newspapers reprints of selections from the current issue. We have suggested some of the more important of these items to concentrate upon, in accordance with the essentials of the public health program outlined above. Cass County is already reporting progress in this newspaper work, and the *Hygeia* subscription programs are going forward actively in many counties. Jackson County, Saline, Buchanan, Cass, Cape Girardeau, and Audrain counties have been especially active in this respect.

This first year has of necessity been primarily one of organization for all the counties. Few of the counties have really been in a position to attempt much as yet in the way of educational work.

The work of public health education is at best a matter of long, patient work. Striking and immediate results are not to be expected, but carried on over a long period it is sure to show results in the lowering of death and disease rates. Legislative work is more immediately satisfactory, but no legislation can be effective that is not backed up by intelligent public opinion and it is this intelligent opinion on public health that we want to try to build up.

SYBIL GIBSON, Chairman.

Since Mrs. Evarts Graham could not be present, her report of the *Hygeia* Campaign was read by Mrs. Gibson and follows:

Report of the *Hygeia* Committee

The work of the *Hygeia* Committee has made some progress the past year, but the chairman is more encouraged by the promise of greater results for next year than by anything actually accomplished this year. A number of new Missouri subscriptions to *Hygeia* are, however, to be credited to the work of the auxiliaries and if the campaign is pushed next year there is no doubt that this number will be greatly increased.

The method pursued this year has been to write each county auxiliary as soon as possible after it was organized, enclosing some information about

Hygeia, a list of subscribers in that county, and suggestions for starting the campaign. This was followed in a couple of months by a second letter, in case no reply was received and, of course, every attempt was made to send further information and encouragement when it was needed.

In all, 63 auxiliaries were written to. So far as reports have been sent in to us, those counties most successful in the work have been Jackson, Buchanan, Cass, Cape Girardeau, and Audrain counties, while a number of other counties are just getting under way, appointing *Hygeia* workers in various communities, getting in touch with other organizations, etc.

Special acknowledgment should be made of the helpful cooperation of Mr. F. V. Cargill, of the American Medical Association, who has been most kind in sending material whenever and wherever it was needed, and who has expressed appreciation of the work the Missouri Auxiliaries are doing.

In this final report, the Chairman would like to include the following recommendations for the consideration of next year's committee and of county auxiliaries:

1. That an effort be made to secure a subscription to *Hygeia* from each doctor in the county medical society, to be placed in his waiting-room.

2. That *Hygeia* be called to the attention of such groups as Parent-Teachers' Associations, Federated Clubs, etc., as a source of material for their programs of study and of work.

3. That the Auxiliary subscribe for *Hygeia* in the name of school libraries, public libraries, hospitals, etc., in case these places cannot be persuaded to subscribe for themselves.

4. That the possibilities of the *Hygeia* work, together with those of work for local publicity, be brought to the attention of each Auxiliary as soon as possible after it is formed, as these two pieces of work can easily be carried forward successfully by the Auxiliary even before it is well organized.

5. That if possible a method be worked out whereby the county auxiliaries or the state auxiliary as a whole, can make use of the very generous commissions on *Hygeia* (60 cents to \$1.25) to benefit the treasury.

An excellent exhibit of *Hygeia* is on display at this convention in charge of the Auxiliary and every member should make a special effort to see it and to have the doctors and their wives from her county see it as well.

Respectfully submitted,

HELEN T. GRAHAM, Chairman.

The five recommendations in Mrs. Graham's report were adopted by the Board.

The question of outlining programs for the county auxiliaries was then discussed. It was decided to present the general plan of education to the county auxiliaries suggesting the use that could be made of *Hygeia* and of the pamphlets of the A. M. A. and of the U. S. Public Health Service, from which the auxiliaries could work out the details of their own programs.

The question of sending papers read at the auxiliaries to women who could not attend was discussed and approved for those rural auxiliaries to whom the plan seemed feasible.

It was decided that hereafter all communications to county auxiliaries be sent through the county presidents.

Mrs. E. P. North, St. Louis, read the Treasurer's report for Mrs. Caulk who was unable to be present. This report as of May 1, 1925, showed:

Treasurer's Report

Receipts from State Dues	\$38.80
Receipts from National Dues	40.25
Saline County (Special Contributions)	22.00
Cass County (Special Contributions)	18.00
Total	\$119.05
Disbursements, National Dues	26.75
Balance	\$92.30
Receipts During State Meeting	
Jackson County	\$56.00
Knox County	2.25
Greene County	4.00
Johnson County .....	.70
Clinton County .....	.50
Total.....	\$ 63.45
Grand Total	\$155.75

Following the treasurer's report, Mrs. M. P. Overholser, Harrisonville, read the report of the Finance Committee. To make this report clear she prefaced it by the one read at the St. Louis meeting which is found in the Secretary's report of that meeting and is not repeated in these minutes.

Report of the Finance Committee

Following the Board meeting in St. Louis the Finance Committee sent to the president of each of the twenty-eight county auxiliaries a copy of the report with the request that some measures be taken to make a substantial contribution to the state funds over and above the state fees. Letters were received from several counties indicating a desire to cooperate in creating a proper fund for our state treasury. From two counties have come special contributions of \$1.00 per member. A few weeks ago the Finance Committee sent out reminders that state and national dues should be in the hands of the state Treasurer, Mrs. John R. Caulk, St. Louis, in time for her to prepare her report for this meeting. Her detailed report has been presented to this meeting separately, but I will say that her report shows:

23 counties, state dues	\$ 62.75
11 counties, national dues	80.75
2 counties, special contributions	40.00
Total	\$183.50
Disbursements	26.75
Balance on hand	\$156.75

It is proposed at this meeting to revise our state constitution so as to provide that state dues shall be twenty-five cents (25 cents) rather than ten cents (10 cents) per member. This will provide a more ample fund for the incidental expenses of the State Auxiliary. To what extent it will meet the actual expenses of the Auxiliary remains to be seen. Only a little more time and experience will afford data for formulating a budget which we must have correctly to estimate the duties of the Finance Committee.

Owing to a misunderstanding in Chicago at the national meeting last year in regard to the state dues to the national organization the amount collected from the counties for national dues, twenty-five cents per member, has been in excess of the sum actually due the national organization from Missouri. This small sum could be prorated and returned to the counties, and will be, if requested.

However, we shall ask these eleven counties that sent in their national dues to permit the unused portion to remain in the state treasury as a special fund for state uses. The Finance Committee recommends this adjustment. It also recommends the adoption of the amendment to the constitution, making the state dues twenty-five cents.

MRS. M. P. OVERHOLSER, Chairman.

Mrs. Overholser was instructed to recommend to the delegates at the state meeting for their decision:

1. That the 25 cents already paid by certain counties to the state treasury for national dues be retained in the state treasury.
2. That the constitution be amended so that the state dues shall be 25 cents to cover both state and national and that any amount above this shall be voluntary.

The report of the Nominating Committee was then called for. Mrs. Jos. W. Love, the Chairman, was absent and Mrs. Guy Noyes reported that no meeting of this committee had been held and that the report was not ready.

Mrs. Bartlett was appointed to take the place of Mrs. Love on this committee and Mrs. Hinchey was appointed to take the place of Mrs. Fischel. It was moved that the rules be suspended and that the members of the Nominating Committee present a slate of officers for election at the Wednesday afternoon session.

Mrs. Hoxie then called for the names of those present who would attend the National Convention of the Woman's Auxiliary at Atlantic City. Mrs. Bartlett stated that she would go and Mrs. Frank Gillham thought she might be able to attend.

On motion the Board adjourned.

Thursday, May 7, 1925—2:00 p. m.

The Executive Board held an informal meeting called by the President, Mrs. M. P. Overholser, Harrisonville, Thursday, May 7, 1925, at 2 p. m., to formulate the plans as outlined in the Annual Meeting of Delegates. It was the general opinion of the members that we should work toward the plans outlined last year for educating ourselves on public health matters and getting this education over to others, as follows:

1. Using material suggested in the report of the Chairman of Education for our programs.
2. Using material sent to us by the circulation bureau of the American Medical Association for use in the lay press.
3. Developing the circulation of *Hygeia*.
4. Working toward the development of county health departments where it seems at all feasible, following the lead of the State Health Department.

ANNA F. MCGLOTHLAN,
Recording Secretary.

MINUTES OF THE GENERAL MEETING

Ball Room, Muehlebach Hotel, Wednesday,
May 6, 1925—10:00 a. m.

The First Annual Meeting of the Woman's Auxiliary to the Missouri State Medical Association was called to order at 10 a. m., Wednesday, May 6, 1925, in the Ball Room of the Muehlebach Hotel, by the President, Mrs. G. H. Hoxie, Kansas City, who announced that while the women were in Kansas City they were guests of the Jackson County Medical Society and the Woman's Auxiliary to the Jackson County Medical Society.

Addresses of welcome were given by Mrs. Robert McE. Schauffler, President of the Jackson County

Auxiliary, and by Dr. Charles C. Dennie, President of the Jackson County Medical Society. Mrs. Schaufler stressed two points; first, that since the older generation has become set in its health habits, which are frequently wrong habits, the sphere of our work is with children who are yet in the habit-forming period; and second, that in the enthusiasm of carrying on our program we must at all times remember whose name we bear, never doing things of which the medical profession would not approve. Dr. Dennie spoke about the influence of religion and politics in medicine and showed how cults have grown out of this influence. He emphasized the duty of this woman's organization as being to combat these cults by disseminating knowledge and the right kind of information.

Summing up the action taken at the fall Board meeting, Mrs. Hoxie said:

"The first and most basic need of every community, city, county or state, is a full-time, scientific health department, adequately financed, free from political manipulation, manned by trained workers who give their full time, not to the treatment of the sick, but to the prevention of disease and the promotion of health. The most effective work that a non-official volunteer organization can do to further its own particular object is to work for such a full-time health department in its own community. When and where such full-time, scientific health departments do exist, volunteer health organizations should work in sympathetic cooperation with and under the guidance of such official health departments. But such a non-political health department is possible only where public sentiment demands it. Such a department can do uninterrupted and efficient work only when supported and upheld by an intelligent public opinion. In education of the public, therefore, lies the hope of improved health conditions. But before the Auxiliary attempts to educate others the members should be willing to educate themselves, first, in the principles of preventive medicine, and second, in the actual conditions and actual needs of the state; just as in the counties the members of the county auxiliaries should be willing to study county conditions and county needs. The year's work of the Auxiliary and the program for the Annual Meeting were both based on recognition of this last fact as the first step leading up to county health units for the whole state as one goal."

Mrs. Hoxie then introduced Dr. James Stewart, Jefferson City, Secretary of the State Board of Health and State Health Commissioner, who opened the program, speaking on the "Fundamentals of a State Program of Public Health Work." He briefly reviewed the work of the State Board of Health since its beginning in 1883, advocated the consolidation of the several boards concerned with public health and spoke of the difference in the way that the counties have taken advantage of state aid in their county health work.

The crystallizing of public opinion to demand state aid in establishing county health departments is a fundamental work of the Woman's Auxiliary in the opinion of Dr. Stewart. He asked the women to do two things in their respective counties for the State Department of Vital Statistics: First, to ask registrars to make reports to the state office; second, to see that mothers who are not under the care of a physician be given a birth certificate.

Dr. I. B. Krause, Jefferson City, Director of the Division of Child Hygiene, spoke on "Child Health Work in Missouri."

He said the problem of infant mortality is much greater than the laity realizes. Federal aid for child hygiene work was granted to Missouri first in 1921 when a Department of Child Hygiene was established. Two important phases of the work have been, first, to get complete birth registration, second, to establish school clinics. Progress has been made along both lines but much remains to be done. School clinics are now held in 80 per cent. of the counties of the state. The State Board of Health cooperates in these clinics with the medical profession in the counties doing only diagnostic work. Dr. Krause said that twenty-four out of every hundred in the institution for the blind are blind because of neglect in childhood, and that 15 per cent. of the children who repeat grades do so because of remediable defects. In the school clinics 144,000 children were examined in 1923 and 1924. Fourteen thousand children were examined in infant and pre-school clinics last year. In 1921 there were three public health nurses in the state outside of large cities, whereas now there are fifty-four. Dr. Krause closed his address by saying that in his opinion the important work of the Auxiliary is to carry the mission of the Board of Health to our various communities, which is to prevent preventable deaths and reduce mortality.

Dr. Joseph W. Mountin, Jefferson City, Director of Rural Sanitation in Missouri, spoke on the "Organization and Activities of Local Health Departments." He reviewed the public health problems in rural districts, saying that the most serious of these problems is the control of communicable diseases. He gave statistics to show how these diseases had been reduced in the counties where whole-time health departments have been established. Ten counties in Missouri already have such departments. Dr. Mountin then explained the county Health Unit and told what steps to take in establishing such a unit. The inadequate service in counties not having full-time departments is so expensive, Dr. Mountin said, that the additional expense of a full-time unit, when county and state are tied together in the county unit plan, is inconsiderable.

Mr. George M. Putnam, Jefferson City, Director of Sanitary Engineering, spoke on "The State Health Department Plan for Improving the Milk Supply of the State." The number of milk-born epidemics in the United States last year that were reported was forty. Where there are no milk sanitation ordinances, the number of typhoid carriers is appalling. An examination revealed the fact that in Alabama 5 per cent. of the dairymen were typhoid carriers. Only eight cities in Missouri, outside of Kansas City and St. Louis, have milk sanitation ordinances. The State Board proposes a standard milk sanitation ordinance known as a grading ordinance, which has the endorsement of the National Dairymen's Association. Where the ordinance has been put into effect the improvement is from 50 to 100 per cent.

The last speaker was Dr. Platt W. Covington, from the International Health Board, who spoke on "Cooperation Between Non-official and Official Health Agencies." Dr. Covington said in part:

"I have a feeling of being startled at the fact that I find myself before a woman's club which has dedicated itself to the task of getting county health units, full-time county health departments, organized in every county of the state, and which realizes that education of the public is the road by which the goal must be reached. So right and sound and comprehensive is your state program, as outlined by your President that I shall consider it my privilege

and pleasure as I go from state, to state, to tell other organizations what you are doing."

Dr. Covington said a county represents approximately 30,000 people whose chief asset is their health. The average number of deaths per year for this population is approximately 420, of which 190 are preventable. Of these 190 preventable deaths the ratio would be 48 from consumption, 12 from typhoid, 20 from communicable diseases, 30 from summer complaint.

When you compare your own county, if it is a county of average population, and find perhaps 700 deaths, 144 sick because of tuberculosis and 300 or 400 of communicable diseases you should feel the responsibility reposed by such facts. He gave briefly the history of the establishing of county health departments from the first; such departments established in Yakima County, Washington, 16 years ago. North Carolina and Ohio were pointed out as having progressed farthest, North Carolina having full-time health departments in nearly half her counties and Ohio in more than half. In Dr. Covington's opinion no better work can now be undertaken by the Woman's Auxiliary than the establishing of county health departments.

This closed the program. A delightful luncheon to all the guests followed, at which Dr. Morris Fishbein, Editor of the *Journal of the A. M. A.*, and Dr. W. A. Clark, President of the Missouri State Medical Association, were guests of honor.

Afternoon Session

The General Meeting of the Woman's Auxiliary was called to order by the President, Mrs. G. H. Hoxie, at 2 p. m., Tuesday, May 5, 1925.

The roll-call of delegates by counties followed:

County	Delegate
Boone.....	Mrs. M. P. Neal
Buchanan.....	Mrs. H. S. Conrad
Buchanan.....	Mrs. Chas. Greenberg
Clinton.....	Mrs. C. H. Risley
Cass.....	Mrs. A. H. Baldwin
Clay.....	Mrs. W. H. Goodson
Cole.....	Mrs. W. A. Clark
Gentry.....	Mrs. W. T. Martin
Jackson.....	Mrs. L. N. Hershey
Jackson.....	Mrs. A. W. McAlester, Jr.,
Jackson.....	Mrs. K. W. Kinard
Jackson.....	Mrs. J. S. Lichtenberg
Jackson.....	Mrs. Noah Adams
Johnson.....	Mrs. Edward Andruss
Lafayette.....	Mrs. C. T. Ryland
Saline.....	Mrs. F. A. Howard
St. Louis.....	Mrs. J. H. Armstrong
St. Louis City.....	Mrs. Frank Hinchey

It might be interesting to know that aside from these delegates there were forty-one women besides the Jackson County women who attended the meeting. Their names are on file.

Reports of the officers and chairmen of committees, were read and approved. The treasurer reported \$156.75 on hand with national dues paid.

These reports are printed in full in the minutes of the meeting of the Executive Board. (See page 329.)

REPORTS FROM COUNTY CHAIRMEN

Buchanan County

Reports from the county chairmen brought out the fact that many of the county auxiliaries have been doing quite active work along the lines outlined at the fall Board meeting.

Buchanan County reported monthly meetings from September to May, inclusive. The meetings up to January had been organization and social meetings. Mrs. Hoxie attended the November meeting and explained the policy of the Auxiliary, and Dr. Mountin spoke at the December meeting on the organization of County Health Departments. Following his talk, a committee was appointed to confer with other health agencies of the county concerning the securing of such a department for Buchanan County. This committee was enlarged to include representatives of the various health agencies and is now awaiting the release of state funds to go before the County Court and ask for a full-time health department. When the appropriation for the State Board of Health seemed in danger of failure, the President and the Legislative Committee Chairman, following the suggestion of the Chairman on Legislation, of the State Medical Association went before bodies of women aggregating about 8,000, explained the necessity for the appropriation and secured letters to the legislators and chairmen of the appropriations committees asking that the full appropriation be allowed.

The Auxiliary has on foot a plan to place *Hygeia* in every rural school (60 in number) in Buchanan County with the assurance that it will be used in the hygienic work of the schools. They gave a card party May 4 and secured more than enough money to pay for these subscriptions. They hope also to place *Hygeia* in all the city schools next year. Plans for this are not definitely worked out, but if they succeed they expect to put on a poster contest in connection with the *Hygeia* work.

Cass County

The Cass County Auxiliary presented an interesting report, the outstanding features of which were the lead of their Auxiliary in the May Day as Child Health Day programs and their cooperation with the County Farm Bureau's Domestic Science agent in her health work in the schools.

Gentry County

The Gentry County report was unique in that the organization of the Auxiliary awakened a sleeping medical society and caused six doctors to join so that their wives might be a part of the Auxiliary.

Saline County

Saline County Auxiliary was first organized as a Hospital Unit in June, 1923, and became a part of the State Auxiliary in July, 1924. At present the Auxiliary has twenty-two active members and ten eligible. Regular monthly meetings have been held during the year at the same time and place with the Saline County Medical Society, with a noonday luncheon, thus affording a social time which adds much to the pleasure of the day. Through the summer months meetings were held in different parts of the county, Marshall being the usual place of meeting through the winter months. Through the efforts of the Auxiliary, on August 13 and 14, a trachoma clinic was held in Marshall. Sixty patients were registered, with thirty active cases receiving treatment. In our monthly meetings we have had discussions on state health conditions, and at various times the following visitors have addressed us on subjects of interest and importance: Dr. G. Wilse Robinson, Kansas City; Dr. Clough, President of State Board of Health of South Dakota; Mr. Clayton, a representative of the State Tubercular Association, and Mr. Burrelson, of the American

Red Cross. Miss Jane Enloe, from the Missouri State Board of Health, gave talks on nutrition to mothers and teachers, and Dr. Ravenel, of the Missouri University, was with us at our January meeting and in his address recommended a Child Health Conference. These all visited the public schools and made addresses to the students. The Auxiliary voted to give its fullest aid to any organization willing to undertake the Child Health Conference. Our County Red Cross Nurse, Mrs. Mildred Fulkerson, assisted by Miss Eva Luther, County Extension Worker from the State University, have undertaken this and hope to succeed in holding this conference in June.

Hygeia posters were exhibited in February and March, thus advertising this valuable magazine. Owing to the illness of the Chairman of *Hygeia* Committee, subscriptions were not as many as might otherwise have been. We have this year twelve new subscriptions.

St. Louis City

The St. Louis Auxiliary report was outstanding in that it stressed cooperation with existing health agencies, not by theory alone but by actually cooperating. This report was sent to the State *Journal* for publication so that auxiliaries located where cooperation with other agencies is possible, the example of St. Louis might be studied and followed.

The reports from the active counties reveal the fact that while they regard the social feature as essential, the women see great possibilities of accomplishing practical results in health education first for themselves and then for others.

The report of the Committee on Amendments was read by Mrs. M. P. Overholser.

Amendments

1. It was moved to amend Article IV, Section III (b) by striking out the last clause, "and from each Councilor District in which all counties are organized, one representative shall be elected."

2. Article VII (a) by inserting after "additional delegate" the words "the president of each county Auxiliary, or in her absence, the vice-president, shall be an ex-officio delegate."

3. Article IX. By striking out the words "ten cents per capita" and inserting the words, "twenty-five cents per capita, out of which the treasurer shall pay the National dues."

4. Article III. Membership at Large. By adding to this paragraph the words "and by those holding membership at large which may be obtained by the payment of an annual fee of one dollar (\$1.00) by women eligible to membership in a county but in whose county conditions are impracticable for the formation of an auxiliary."

Mrs. Guy L. Noyes, reporting for the Nominating Committee, presented the following names for officers and directors:

Report of Nominating Committee

For President, Mrs. G. H. Hoxie, Kansas City; Vice Presidents, Mrs. Emmett P. North, St. Louis; Mrs. Joseph W. Love, Springfield; Mrs. John C. Parrish, Vandalia; Mrs. Frank W. Gillham, Jefferson City. Treasurer, Mrs. C. T. Ryland, Lexington. Corresponding Secretary, Mrs. J. G. Montgomery, Kansas City. Recording Secretary, Mrs. A. B. McGlothlan, St. Joseph. Directors, Mrs. Guy L. Noyes, Columbia; Mrs. Evarts A. Graham, St. Louis; Mrs. W. M. Bickford, Marshall; Mrs. Leland Boogher, St. Louis. Chairman of Organization, Mrs. Willard Bartlett, St. Louis.

Mrs. Hoxie declined to serve a second term and an amended list was then given to the Secretary by the Chairman of the Nominating Committee with the name of Mrs. M. P. Overholser, Harrisonville, for President and Mrs. G. H. Hoxie added to the Directors. Nominations from the floor were then called for by the President.

A motion was made by Mrs. Hershey and seconded by Mrs. Neal that the Secretary cast the vote for the names as finally presented by the Nominating Committee. The vote cast was as follows:

For President, Mrs. M. P. Overholser, Harrisonville. Vice Presidents, Mrs. Emmett P. North, St. Louis; Mrs. Joseph W. Love, Springfield; Mrs. John C. Parrish, Vandalia; Mrs. Frank W. Gillham, Jefferson City. Corresponding Secretary, Mrs. J. G. Montgomery, Kansas City. Recording Secretary, Mrs. A. B. McGlothlan, St. Joseph. Directors for two years, Mrs. George H. Hoxie, Kansas City; Mrs. Guy L. Noyes, Columbia; Mrs. W. M. Bickford, Marshall; Mrs. Leland Boogher, St. Louis. Chairman of Organization, Mrs. Willard Bartlett, St. Louis.

Mrs. M. P. Overholser then took the Chair for a few moments to consider the appointment of delegates to the Woman's Auxiliary of the A. M. A. at Atlantic City. As it could not be ascertained at the moment just who could go to Atlantic City, Mrs. Overholser took the appointment of delegates under advisement.

On motion the session adjourned.

Thursday, May 7, 1925—10 a. m.

On Thursday morning, May 7, the session was given over to a discussion of Public Health Education. Mrs. Hoxie, as chairman of May Day Child Health Day, explained the plans for the work of this committee for the year, which are to be "securing better birth registration." She gave detailed plans as to how this is to be done and urged auxiliaries to cooperate in getting it done.

In giving a report for *Hygeia* it was brought out that Missouri had only 767 subscriptions at that time which placed her in the 29th position in the sale of *Hygeia*. This organization should sell 2500 copies in Missouri during the year, it was thought.

Mr. T. J. Walker, Columbia, Editor of *School and Community*, gave a very illuminating talk on "What Health Principles Are Our Rural School Buildings Teaching?" He showed the contrast between modernly constructed small town schools and the poorest rural schools of the southern part of the state, and gave some interesting statistics concerning the typical country schools, all of which almost made us hang our heads in shame that our state tolerates these conditions. He said the reason for these conditions is purely one of organization. Small groups comprised in a rural school district cannot afford the modern buildings and equipment that large groups can support, therefore a large mass of people cooperating is the solution to the problem. An attempt to effect such organization and consolidation through a bill in the last legislature failed, but according to Mr. Walker, the proponents of this plan will try again.

Miss Marian Dunshee, Columbia, gave a very interesting talk on "Why the Country Boy and Girl Need Us." She said that no child should suffer from malnutrition or for want of medical attention. Every child should learn the principles of hygiene and preventive medicine.

Realizing that teachers have an opportunity to put a good deal of health education in their courses, the Extension Service of the University has evolved

a plan for entering schools in health contests. Miss Dunshee explained the details of these contests and proved that it is a most excellent plan for getting school children interested in health education.

Dr. Herman E. Pearse, Chairman of the Committee on Health and Public Instruction, spoke on "This Thing of Public Health Education."

Mrs. M. P. Overholser, Harrisonville, Chairman of the Committee on Resolutions, reported as follows:

Resolutions

Whereas, The Woman's Auxiliary to the Missouri State Medical Association, having arrived in this meeting at its first milestone, and desiring to express its appreciation of certain outstanding activities of which it has been the beneficiary the past year, and of the many courtesies received in this hospitable city, therefore be it

Resolved, That for the earnest, generous, untiring and intelligent services to the Auxiliary of its retiring president, Mrs. George H. Hoxie, and its Chairman of Organization, Mrs. Willard Bartlett, our deepest gratitude is due; that we are mindful of and thoroughly appreciate the service rendered by the other officers and members of the Executive Board; that our sincere thanks are due those honored guests who have supplied us with the interesting and instructive addresses on the program of this meeting; due also to the State Medical Association and its officers for their helpful cooperation throughout the year, and to the Jackson County Medical Society and its Woman's Auxiliary and their respective executive boards for the hospitality received at this meeting; and be it further

Resolved, That a copy of these resolutions be entered on the minutes of this meeting and a copy be sent to the *Journal of the Missouri State Medical Association*.

Mrs. Overholser, President-Elect, took the Chair for a few moments and in a parting word urged the auxiliaries to "carry on" in the work they had so well begun and to follow the system already inaugurated.

A most delightful part of the program was yet to follow, the recreation that had been well earned by several strenuous sessions. Too much cannot be said concerning the spirit of hospitality of our hosts and hostesses. The visiting women were taken for a delightful ride over Kansas City's beautiful boulevards, this ride terminating at the Mission Hills Country Club, where a most pleasing musical program was given by talented artists in the Jackson County Auxiliary. Following the program, refreshments were served and a social hour was enjoyed.

At night, the visitors were guests of the Jackson County Medical Society at an Orpheum Theatre party. They left the city feeling that Kansas City is indeed not only the "Heart of America" but the spirit of hospitality itself.

ANNA F. MCGLOTHLAN,
Recording Secretary.

which have gradually become worse so that at present time any slight exertion brings on an attack. Patient states that he could not walk one block without pain. Had rather severe attack two months prior to entrance when he had severe pain over upper sternum, became unconscious and was taken to City Hospital. Regained consciousness ten minutes later and noticed pain in right arm and leg for several hours after attack.

Family and Past History. Unimportant. Wife has had no miscarriages. Remembers no illness. Denies lues. No dyspnea, no pain before present illness.

Physical Examination. Patient quiet with slight cyanosis of extremities. No dyspnea or edema. Pupils equal, irregular, react to L & A. Small corneal opacity on left. Chest shows moderate emphysema. Heart, apex not seen, feebly felt. Apex in 6th I. C. S. 10.5 cm. from M. S. L. No enlargement at base. Sounds poor quality and distant. Brachials slightly thickened. Radials not much thickened. B. P. 135/75. Pulse regular. Tick-tock rhythm was noted at one time. Liver edge 2 cm. below C.M.

Laboratory Findings. Urine, V.F.T. albumin at times, otherwise negative. Blood, normal. Wassermann ++ Electrocardiogram has persistently shown right bundle branch block throughout. While in hospital had rather frequent attacks of angina of rather mild character. Had two rather severe attacks. Amyl nitrite relieved these attacks. A cervical sympathectomy was then decided upon and patient was transferred to Surgical Service.

1-30-25, under morphine-hyosine seminarcosis and novocaine, Dr. Graham removed the left superior and middle cervical sympathetic ganglia and the intervening nerve roots. Immediately following the operation the patient developed a contracted pupil, exophthalmos and ptosis of left lid. One week later there was some pain in left superior laryngeal region extending over area of clavicle and behind left ear. He also had an area of hypalgesia on left jaw. The pain was relieved somewhat by cocaineization of sphenopalatine ganglion. The pain has now subsided and he only notices slight pain in region of left shoulder. The patient has noticed no return of the precordial pain.

An exercise tolerance test was done 12 days ago, and there was no return of pain whatever during these tests, one of which consisted of a brisk walk for 300 yards. There was noted a delay in return to normal of blood pressure and pulse following some of these tests which is indicative of the myocarditis which the patient is known to have.

DISCUSSION

DR. BARR: I think that Dr. Abel has emphasized most of the important points in this case. There is little doubt that this man suffered from true angina pectoris. Not only from the character and location of the pain but the relationship of pain to exercise, anxiety, etc., marked it as a perfectly definite and typical case. It was also typical that pain was the predominant factor. Previous to the time he entered the hospital, the patient had no symptoms of cardiac incompetency. Before operation the pain was frequent and severe. Following the operation the pain has so far been entirely absent. It is interesting to attempt an evaluation of the accomplishment. The man is now without pain which was his only symptom and considers himself a well man. He has still, however, a right bundle branch defect; the heart sounds are of a poor quality; the blood pressure is elevated, and he has a slightly abnormal

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

One Hundred and Eleventh Meeting, March 9, 1925

1. PRESENTATION OF CASES.

A. CASE OF DEMENTIA PRAECOX,
By DR. JONES.

B. CASE OF ANGINA PECTORIS.—By
DR. OLIVER ABEL, JR.

H. G., age 52, entered hospital 12-28-24, with complaint of pain over upper sternum and in wrists on exertion. Onset nine months previously with attacks of pain over upper sternum and in wrists on exertion

reaction to the exercise tolerance test. We believe that while he can now do many things which previously he could not undertake, he should nevertheless be under constant medical supervision and should treat himself as a semi-invalid.

Following the operation, symptoms of superficial pain and hypoesthesia appeared in the region of the jaw due no doubt to disturbance of the superficial cervical nerves. It is a curious and unexplained fact that these pains could be completely relieved for one hour to one hour and a half by cocaineization of the nasopalatine ganglion.

DR. RANSON: What is the explanation of the relief of pain in cases of angina pectoris as a result of the removal of the left superior cervical sympathetic ganglion? In the first place, I feel sure that it is not due to the cutting of sensory nerve fibers for the heart. There are no sensory fibers in the cervical sympathetic trunk. If this nerve is exposed in an anaesthetized cat, which is then allowed to recover from the anaesthetic, the nerve can be stimulated electrically without the animal showing any discomfort. This shows that there are no pain fibers in the nerve. The large sensory fibers for the heart can be traced histologically from the upper thoracic nerves, through the white rami and upper part of the thoracic sympathetic trunk to the annulus of Vieussens and then through the cardiac branches of the stellate and inferior cervical sympathetic ganglia to the cardiac plexus. None of these large sensory fibers are found in the cervical sympathetic trunk.

In one case which I had the privilege of observing in Chicago, left superior cervical sympathectomy gave complete relief. I secured the tissue removed at this operation and studied the cervical sympathetic trunk and superior cardiac nerve histologically. Neither of them contained any large sensory fibers. The relief experienced by the patient was therefore not due to the cutting of sensory fibers.

The radiation of pain in angina pectoris along the inner side of the left arm and to the upper part of the chest wall shows that the nerve fibers which mediate the pain run through the upper thoracic nerves. These are in no way involved in the operation of superior cervical sympathectomy.

2. VITAMIN FEEDING AND COAL TAR STIMULATION.—By DR. L. H. JORSTAD.

From a study of the tissue culture, Burrows has shown that the growth of body cells depends on the formation and a certain high concentration of a primary oxidative product of body cells. This substance is not retained by the cell, but is readily washed away by the blood, serum or salt solution. For cells to grow independently, they must be crowded together in a small amount of medium, amply supplied with food and oxygen. As this primary oxidative product, the *archusia*, concentrates, the cells liberate another substance, the *ergusia*, which has strong affinities for fats and proteins. As the *ergusia* is liberated by the cell, small mobile particles of fat and proteins are drawn into the cells. Larger masses of these substances draw the cells to them. While the cells of the body can grow independently only when they can form and retain a large amount of their own *archusia*, they can be made to grow dependently by supplying them with *archusia* from other sources. In the normal organisms the growth is dependent. In cancer the cells are crowded and the circulation relatively reduced, the growth is independent. Anything that

can primarily build such a tissue can form cancer. I showed in an earlier paper that drops of coal tar form such a tissue organization by dissolving the *ergusia* of the tissue cells and drawing them into a crowded mass about its periphery. Fresh drops of coal tar take so much *ergusia* away from the cells that many degenerate and the organism is often killed. I wondered whether the fat soluble vitamin A may not be important in forming the *ergusia* of the cell. I fed animals on a diet of deficient vitamin B, deficient vitamin A, high vitamin A, high vitamin B, and on a diet very rich in vitamin A. The animals fed on a diet rich in vitamin A withstand several times the lethal dose of coal tar for those fed on a diet poor in or which contains no vitamin A. The absence or presence of vitamin B has no effect on the toxicity of coal tar.

Experimental embryomata are more cellular and poorer in blood vessels than adult tissue. The *archusia* is present in greater quantity. The cellular growth about the coal tar in this tissue is more marked.

In tissue with a high concentration of vitamin B, coal tar causes an attraction of cells from a wide area, but in no such proportions, as in the cases where the animal contains a high content of vitamin A. These cells show, however, a greater tendency to grow than in the animals with a low vitamin B. It brings about a set of conditions in the body similar to that seen in the tissue culture when *archusia* is added to the medium.

In tissues with a high content of vitamin A, the droplets of tar become dispersed into the tissue. Apparently this tissue is saturated with *ergusia*: the tar does not destroy the cells which it attracts to it. These cells remain active for a long time. In the mass of cells the *archusia* accumulates and they grow as a result. In tissue with a deficient amount of vitamin A, the cells degenerate as they migrate to the tar.

DISCUSSION

DR. MONTROSE T. BURROWS: In our earlier studies it has been possible to show that body cells have no special mechanism for migration. Their migratory activity is an adaptation of their growth reaction. It has been possible for us to analyze the mechanism of the growth reaction of body cells in the tissue culture: They show a simplicity of structure not noted in other cells. The body cells cannot migrate under ordinary conditions into a water medium, but only into proteins and fats. Their movements are accomplished by their liberating a substance which is readily absorbed only by proteins and fats. This substance I have named the *ergusia*. It has strong affinities for the cell as well as proteins and fats in the environment. Mobile proteins and fats are drawn by it into the cell. The cell is drawn into fixed masses of proteins and toward larger masses of fat, which have a greater inertia than the cell. The first reaction in the cell is known as ingestion, while the latter is known as migration. This *ergusia* is not liberated by the cells under all conditions, but only when another substance, the *archusia*, reaches certain concentrations about the cells. The *archusia* is formed in the normal oxidative reaction of every cell. It is soluble in isotonic NaCl solution, in serum and in blood. The body cell has no means to retain this substance in it. Its concentration is determined always by the environment. The *archusia* (S) in low concentrations has no effect. In slightly higher concentrations (S²) it liberates the *ergusia*—the cell stores proteins and fats or migrates toward food. In higher concentration (S³)

the cell not only migrates and takes up food, but digests these proteins and fats and grows.

Since these cells cannot retain their *archusia* except in stagnant environments an independent growth of them depends on a crowding of the cells and stagnation. Such are the conditions existing only in cancer. Coal tar dissolves the *ergusia* of the cells. Viscid drops of this substance placed in the tissue draws the tissue cells to it away from their intercellular substances and blood vessels. In doing so the cell suffers certain degenerative changes from the loss of their *ergusia*. Jorstad has shown that coal tar produces cancer only in that it thus builds about itself a dense mass of cells poor in blood vessels. It does not stimulate the cells to grow, but as they become massed together and the *archusia* which they form stagnates about them, they assume the power of independent growth.

In the normal organism the cells cannot grow unless supplied with *archusia* from other sources. We have noted that the cell's activity is dependent on the presence of two substances, the *archusia*, a water soluble substance, and the *ergusia*, a fat soluble substance. These correspond, as far as these solubilities are concerned, to vitamins B and A, respectively. The question arose are not the vitamins A and B essential for the normal life of higher animals in that they are the same as the *ergusia* and the *archusia*, respectively, or are essential in the formation of these substances. In a paper at the last meeting of this society, we showed that extracts rich in *archusia* act as vitamin B when fed to animals. It has been possible to test the relation between vitamin A and the *ergusia* in these experiments of Jorstad on coal tar. Coal tar absorbs the *ergusia* of the cell and causes them to show degeneration in the normally fed animal. It is toxic in small doses. In animals fed on a diet rich in vitamin A, Jorstad finds the cells do not degenerate and that these animals can withstand four times as much coal tar as animals fed on a diet poor in vitamin A.

It has thus been possible to come for the first time to some understanding of the nature of vitamins. Lipschitz and others have noticed that cancers do not develop uniformly in animals repeatedly painted with coal tar. What causes this individuality in the reactions of animals has been a question of discussion. It is possible as these experiments show that it is related to the *ergusia* content of the cells of the animals treated. Those rich in *ergusia* must suffer cancerous degeneration more readily than others in which the cells will degenerate rather than grow when drawn to drops of coal tar. The growth of the cells about the tar is a response to their becoming crowded together rather than any stimulation by the tar. The tar tends to decrease rather than increase their growth response. The cells rich in *ergusia* recover readily at the tar border, because this action of the tar is limited in each case to its becoming saturated with the *ergusia*. It is on this account that single drops of tar cannot produce cancer. Several applications are necessary to draw sufficient cells together for them to retain sufficient growth energy to overcome the resistance of the body.

3. A CLINICAL STUDY OF FIFTY-FOUR CASES OF CHARCOT JOINTS. —By DR. J. ALBERT KEY.

The incidence of arthropathies in 744 tabetics was 6.14 per cent. Like neurosyphilis in general arthropathies were more frequent in the white race, only five of our cases occurred in negroes. A positive

history of syphilis was obtained in only twenty-eight cases. In these the average duration of syphilis before the beginning of the arthropathy was 20.6 years. In all of our cases there was clinical evidence of tabes.

The onset was always sudden with swelling and usually accompanied by disability, pain, and tenderness. The pain and tenderness subsided as the disease progressed. The joints of the lower extremities were most frequently affected. In the early cases the X-ray is usually negative for bony changes. As the condition progresses the disintegration of the joint accompanied by new bone formation gives the classical picture.

In Charcot cases lower cord symptoms are more common than in ordinary tabetics and conversely optic atrophy is unusual. The blood Wasserman was negative in 66 per cent of our cases. Spinal fluids were obtained from thirty-seven cases. In these the serological findings were negative in 45 per cent. In 316 tabetics without arthropathies the spinal fluids were negative in only 20 per cent.

The prognosis is not good. Occasional cases are apparently arrested spontaneously. Usually the joint becomes disintegrated to a marked degree. The treatment consists of intensive therapy for the neurosyphilis and orthopedic treatment of the involved joint. Operative interference is not recommended except in the spine where a massive graft is a logical procedure. Our results with tryparsamide are encouraging but as yet inconclusive.

DISCUSSION

DR. JONES: The account of these operations is very interesting. In cases which I have in mind in the nerve clinic they do not show positive fluid. The majority of the cases have negative blood analyses.

DR. GRAHAM: I have enjoyed this very careful study of these cases that Dr. Key has reported. I am discussing this paper in order to ask a question—I want to clear up a misunderstanding. Are Charcot joints always syphilis joints?

DR. KEY: No, they are neurotrophic joints and occur also in syringomyelia.

DR. GRAHAM: I thought it had been established that Charcot joints had nothing to do with syphilis.

DR. KEY: A great many people think that about Charcot joints and in experiments on animals described by Eloesser, neurotrophic joints were produced by section of the dorsal roots, but Hazen, in a recent book on syphilis, states that you never see a Charcot joint without periostitis and that this suggests the presence of spirochetes in the joints. That is the reason I aspirated the joints and injected the fluid into rabbits. In a number of our cases there was no periostitis. I think it is a purely neurotrophic condition.

DR. BARR: A few weeks ago we had in the wards a case of tabes dorsalis complicated by an arthritis which seemed to be infectious and was certainly not atrophic. It was suggested that an infectious arthritis in the course of a tabes might predispose to the typical Charcot joint. I wonder if Dr. Key has seen any evidence of this in his cases where some other form of arthritis which started later on developed into Charcot's.

DR. KEY: No. The Charcot's were, as far as I know, absolutely normal until the day they began to swell. Two cases operated on were presumably arthritis, but were probably operated on at the time the Charcot's was beginning. In one case some bone was removed; in another, the cartilage was removed. It was rather to be expected that in patients of this age you would have some signs of

arthritis, but very little was found. Another thing—none of these cases had ever had any syphilitic arthritis—no pseudo-white swelling or any syphilitic joint involvement.

DR. CADY: In our series of about 200 cases, of neuro-syphilis here we have had two Charcot spines, three or four Charcot hips, four or five Charcot knees. One of the latter apparently began with an acute arthritis. The patient had a sore throat and a few days later the knee was red, swollen, hot and fluid had collected. The veins were dilated over the knee. The patient would not permit removal of the joint fluid. An unfavorable prognosis was given. When the inflammation subsided the knee was a typical Charcot joint. This patient also developed Charcot ankles, but these did not have the redness and inflammation that the knee showed.

Three months ago another tabetic patient got off the street car and tripped, bruising the right knee. The next day an effusion was present but without any signs of acute arthritis. It was tapped and a bandage was put on the knee. After a month the knee has subsided to normal proportions, and this afternoon I could not detect any difference between the two knees.

I think there are some indications that Charcot joints do develop from arthritis. There was redness, swelling and local heat in the first case, tenderness and then later a Charcot knee developed. The second case did not have such a beginning. An acute arthritis of an infectious nature would seem to predispose in a great measure toward the development of Charcot joints in tabetic patients.

DR. KEY: I tried to emphasize the fact that Charcot joints may in the very beginning be rather acute and may be diagnosed as arthritis, and I was somewhat surprised at the case which began with pain, swelling and dilatation of the blood vessels. As a rule they arise spontaneously, but sometimes follow a trauma. In one case a man broke his leg at the ankle joint two years before the onset of the Charcot joint. He had had a real fracture, and then developed a Charcot joint, and this apparently went down without treatment and some years later caused him very little trouble. He had been a day laborer around a lumber yard ever since. It may be that with improvement under treatment our cases were that same type. We have a negro patient with a Charcot hip who was practically bed-ridden, and now he walks around, very well, and is able to earn his own living.

4. SIMPLE IMMEDIATE TREATMENT FOR VOMITING FROM ANY CAUSE.

—By DRs. E. P. LEHMAN AND H. V. GIBSON.

Observations, already published, in a case of complete jejunal fistula, suggested that 2 per cent sodium chloride solution given by mouth has a direct local, stimulating effect on peristalsis of the stomach and upper bowel. Brief case reports substantiating this observation were reported. The 2 per cent solution was given cool in amounts varying from 50 to 100 c.c., and, in every case, resulted in immediate, temporary relief from nausea and vomiting. These results are given with hesitation on account of the doubtful nature of such clinical evidence. The simplicity of the method, however, warrants a trial.

DISCUSSION

DR. GRUBER: Did I understand Dr. Lehman to say that sodium chloride is beneficial in any form of emesis? Digitalis in producing emesis probably has no effect upon the gastric mucosa. Its action is di-

rectly on the nerve ending in the heart muscle and arch of the aorta. According to Dr. Hatcher these impulses run in the sympathetics to the vomiting center. I cannot see how saline given by mouth is going to give permanent relief in these cases of poisoning from digitalis as the saline therapy is directed only toward the stomach.

Another statement made by Dr. Gibson was that extremely hot water as well as ice cold water will relieve vomiting—One of Dr. Fantus' favorite treatments is ice cold Seltzer-water.

DR. LEHMAN: If our idea is correct, it makes no difference what the cause of vomiting is. The solution seems to have a direct effect upon the local mechanism. Whether or not the clinical effect of disappearance of vomiting will result, may depend upon the degree of stimulus to reversal of peristalsis. This clinical effect will be only temporary, if the cause of vomiting is other than a local one in the stomach or bowel.

DR. ZINK: I would like to take exception to Dr. Lehman's statement that nausea is produced by antiperistalsis. We have an opportunity in the X-ray department of observing many patients who are nauseated following ingestion of barium. It is rarely that antiperistalsis is observed, and when it is, vomiting follows shortly.

BATES COUNTY MEDICAL SOCIETY

The Bates County Medical Society held its regular monthly meeting in Butler, May 28, 1925. Due to the fact that the members were all very busy and the meeting was held in the afternoon, the attendance was small.

The program of the afternoon consisted of informal talks by Dr. Damon Walthall and Dr. Joseph McKee, both of Kansas City.

Dr. Walthall discussed infant feeding and care during the first two years of infant life. He particularly stressed methods employed to secure and maintain adequate mother's milk. He advised that infants be placed on complementary feedings of cereals from the third to the seventh month instead of waiting until later. His remarks led to very helpful discussion by those present.

Dr. McKee discussed trachoma, its diagnosis and treatment. During the discussion many other diseases of the eye were discussed with Dr. McKee by the members present.

We were very fortunate indeed to have had Dr. Walthall and Dr. McKee with us and hope to have them with us at a later date when our attendance is better.

It was decided to have the June meeting at 7 p. m., June 25, so that more of the members might be able to attend.

June Meeting

The Bates County Medical Society held its regular monthly meeting June 25, 1925, at 7 p. m. There were in attendance, Drs. Hornback, Dulin, Craig, and McLemore, of Nevada; Drs. Todd and Bates, of Adrian; Dr. Herbert A. Rhoades, of Foster; Dr. Hartwell, of Amsterdam; Drs. Allen and Williams, of Hume; Dr. Claude Allen, of Rich Hill; Drs. Newlon, Foster, Crabtree, Chastain, and Thiele, of Butler.

The meeting was called to order by the President, Dr. Herbert A. Rhoades, who introduced Dr. Peter T. Bohan, of Kansas City. Dr. Bohan held a heart clinic stressing important historical points. The properties of the heart muscle were enumerated

and diagnosis made upon the basis of the particular function of the heart muscle found to be at fault. Needless to say, Dr. Bohan's clinic was very much appreciated and we extend to him our thanks.

The President then introduced Dr. E. Lee Miller, Kansas City, whose clinic considered the surgical aspects of the patient suffering from exhaustion. It was refreshing to hear a surgeon advise against a gallbladder operation in the face of a positive Murphy's sign; against a pelvic operation in a case where there were possible indications present; and against surgical procedures in general in a patient whose symptoms were the result of exhaustion and probably would not yield to operative procedures.

The Bates County Society extends to both Dr. Bohan and Dr. Miller, a most cordial invitation to meet with us again.

The following resolutions in memory of Dr. T. F. Lockwood were adopted:

T. F. LOCKWOOD, M.D.

In profound sorrow the members of the Bates County Medical Society are called upon to record the sad and untimely death of Dr. T. F. Lockwood, May 15, 1925.

Dr. Lockwood had not been in good health since last fall when he was afflicted with an infected gallbladder and later in the winter suffered with an attack of influenza, but he had recovered sufficiently to take care of his practice and was feeling much better at the beginning of his fatal illness. He attended the meeting of the Missouri State Medical Association in Kansas City in May, and while there had a small lipoma removed in the office of a local surgeon. The wound became infected before he came home and his death resulted one week later.

Dr. Lockwood was well known in the profession throughout the state of Missouri. He was always loyal in his attendance at all local and State Association meetings. Last year he was President of the Bates County Society, and in times past had filled almost all the offices in this society. A few years ago he was Orator on Medicine at a meeting of the State Association in Joplin. He loved to write and had contributed many articles to various medical journals. He possessed much originality, was a great student of physics and mechanics and this was manifest in his articles. In treating fractures he used many splints of his own design.

We have lost one of our most able, faithful and conscientious members, and the Bates County Society desires to record the following resolutions:

WHEREAS, Dr. T. F. Lockwood, one of our best known and influential members, has been called from our midst by the Great Physician to his eternal reward for a good and faithful life, well spent; and

WHEREAS, For thirty years he was an active member of the Bates County Medical Society, taking a leading part in all its activities, and that his every act and deed was for the good of the society and profession in the community in which he lived, and by reason of his ability, patience, skill, and sympathy as a physician and his zeal, integrity, industry, unselfish service and patriotism as a citizen, he reflected honor and credit upon the medical profession, and his life and influence were for the betterment and upbuilding of his profession and the community in which he lived, and

WHEREAS, His memory should be cherished by the members of this society, his virtues emulated, his able, honest, and unselfish service be recognized, and the record of his good deeds and his exemplary life be spread upon the records of this society, therefore be it

Resolved, By the Bates County Medical Society that in the death of our esteemed associate, Dr. T. F. Lockwood, it has lost a faithful and valued member; that he was a patriotic, honest, and unselfish citizen, that he merited the honors conferred upon him, and that he was worthy of every important trust with which he was invested, and preserved unsullied the reputation of the medical profession; and be it further

Resolved, That the members of the Bates County Medical Society deeply deplore the death of our beloved member and friend and esteemed citizen, and that we do hereby extend to his bereaved family and friends our heartfelt and profound sympathy; and be it further

Resolved, That these resolutions be spread upon the minutes of this meeting of the Bates County Medical Society as a memorial of respect, love, and esteem for our departed member, and that a copy of these resolutions be sent to his bereaved family and to the *Journal of the Missouri State Medical Association* and to the press of this city.

GEO. H. THIELE, M.D.

Secretary.

BUTLER COUNTY MEDICAL SOCIETY

Butler County Medical Society has been having some excellent meetings recently, the one held on April 20 being particularly attractive. In response to the request from the members of the society Dr. W. A. Newman Dorland, of Chicago, attended the meeting on April 20 at Poplar Bluff and addressed the society in the afternoon and in the evening. At 4 o'clock in the afternoon he gave an address to the members of the society on "Endometritis" and at 8 o'clock in the evening he delivered an address on "Eclampsia." These meetings were the best we have had for many years in this part of the state. The subjects were well discussed and the men who drove in over seventy miles away felt that they were fully repaid for making the trip. The officers of the society plan to arrange for at least two such meetings annually. The good roads leading into Poplar Bluff make the city very accessible for many miles around it and the members have evinced a great interest in attending such meetings. The following attended the meeting of April 20: Drs. C. C. Sheets, Ellsire; T. W. Cotton, H. L. Meador, Van Buren; L. B. Robbs, A. F. Bugg, Ellington; C. W. Brown, M. L. Cone, Campbell; John D. Van Cleve, Malden; E. G. Cope, Hornersville; H. E. White, Naylor; S. N. Holliday, Rombauer; John F. Wagner, Greenville; J. P. Brandon, W. J. Hux, Essex; W. H. Russell, Senath; Dawsey Ryan, T. C. Allen, Bernie; M. V. Waddle, Doniphan; W. B. Kerr, Dudley; A. Crump, Broseley; C. E. Lewis, Advance; S. S. Davis, Bloomfield; M. M. Lane, Harviell; Alexander Johnston, Grandin; V. L. Greathouse, Fisk; B. J. Cline, W. S. Bailey, Ira W. Seybold, I. N. Barnett, J. W. Mott, J. B. Eure, F. G. Bond, J. M. T. Smith, A. W. Davidson, A. R. Rowe, J. Lee Harwell, J. Spaulding, H. M. Henrickson, L. B. Knecht, J. W. McPheeters, W. F. S. Taylor, W. L. Brandon, Wm. Spaulding, Poplar Bluff; H. L. Throgmorton, W. E. Hughes, Pocahontas, Arkansas; J. F. Walker, Richard C. Lynch, Success, Arkansas; Geo. Cohn, E. W. Thornton, F. H. Jones, J. E. McQuire, Piggott, Arkansas; J. P. Hiller, Pollard, Arkansas; N. J. Latimer, Corning, Arkansas; W. O. Parrish, Rector, Arkansas.

CALDWELL COUNTY MEDICAL SOCIETY

The Caldwell County Medical Society met at Breckenridge, May 28, at 2 p. m.

Those present were: Dr. G. S. Dowell, of Braymer, President, Dr. Tinsley Brown, Secretary, and Dr. H. R. Booth, of Hamilton; Drs. W. L. Chaffin and Mrs. O. N. Thompson, of Breckenridge; Dr. B. F. Carr, of Polo; and Dr. W. S. Shouse, of Kingston. Drs. C. C. Conover and O. F. Bradford, of Kansas City, were present by invitation and were accorded the privileges of the society.

There was a large number of clinical cases presented. Most of the time was taken up in the examination and discussion of these cases. The meeting was a good one and those present felt that they had been well paid for the visit.

A vote of thanks was extended to Drs. Conover and Bradford for their presence and participation.

The society adjourned to meet in Braymer the third Thursday in June.

TINSLEY BROWN, M.D., Secretary.

The Caldwell County Medical Society met in Braymer, June 26, at 2 p. m.

Members present were: Drs. Geo. S. Dowell, President; Tinsley Brown, Secretary; H. R. Booth, B. F. Carr, J. E. Gartside, H. H. Patterson, O. N. Thompson, C. H. Wilbur. Visitors: Drs. George C. Mosher, Kansas City; A. B. Jones, Kansas City; Austin Carr, Polo; C. P. Ecklebery, New York.

The minutes of the last meeting, held at Breckenridge last May, were read and approved.

Drs. Gartside and Wilbur were appointed to help in the examination of children in the Decalton Camp to be held near Cameron, July 13 to 18.

Dr. Mosher read a very interesting paper on "Sepsis and Eclampsia," which was very instructive.

Dr. Jones talked on lobar pneumonia and its treatment with quinin dihydrobromid given intravenously, intramuscularly, or by mouth.

A number of clinical cases were presented and examined.

A vote of thanks was extended to the visitors for their part in making the meeting a very successful one.

The society adjourned to meet in Polo, the third Thursday of July with the view of making the event a picnic.

TINSLEY BROWN, M.D., Secretary.

CASS COUNTY MEDICAL SOCIETY

The regular meeting of the Cass County Medical Society was held in the Circuit Court Room, Court House, Harrisonville, Thursday afternoon, June 11.

Some excellent papers were read by Kansas City men who had consented to be guests of the society at this meeting and present papers. Dr. P. H. Owens, Kansas City, read a very interesting paper on "Ulcer of the Stomach and Duodenum." This paper brought out these points: That ulcer of the stomach and duodenum is largely preventable by each individual being careful about seeing that he is free from all foci of infection; that minor stomach symptoms should not be passed by too lightly but should be gone into very carefully to find if they might not be referable to an early ulcer; and if so, ulcer of the stomach and duodenum will remain a medical problem in the largest percentage of cases.

Dr. Sam Snider, Kansas City, read a paper on "Bronchiectasis and Bronchiectatic Abscess," which he illustrated with lantern slides showing various stages in development, and the relation of this condition to other chest conditions. Dr. Snider went

into detail very fully to bring out the differential points in diagnosing this condition.

Dr. R. W. Swinney, Kansas City, presented a paper on "Prevention of Heart Disease," which dealt largely with the problem of educating the public to recognize the importance of protecting the oncoming generation from contagious and infectious disease, and of having proper medical care in such conditions if present.

Dr. E. H. Skinner, Kansas City, read a paper on "The Use of Radium in Uterine Conditions," which dealt chiefly with the treatment of uterine conditions occurring during the climacterium. He emphasized the fact that any change from the normal menstrual condition at this time should be carefully watched for early symptoms indicating conditions of more serious nature.

All the members of the local society and others interested in their own well being would have been more than repaid for their time if they could have heard the papers read and the discussion of the subjects.

Following the regular program the members of the society and their guests were bountifully and graciously served with a picnic supper on the lawn of the home of Dr. and Mrs. M. P. Overholser, by the Woman's Auxiliary to the Cass County Medical Society.

The physicians attending the program and picnic were: Drs. J. T. Hornback, Nevada; O. B. Hall, L. J. Schofield, J. I. Anderson, Warrensburg; H. A. Brierly, Peculiar; W. L. Viers, H. Jerard, Pleasant Hill; J. S. Triplett, D. S. Long, M. P. Overholser, A. R. Elder, Harrisonville; E. H. Skinner, Sam H. Snider, R. W. Swinney, H. S. Crawford, P. H. Owens, Kansas City; R. M. Miller, Belton; R. D. Ramey, Garden City; T. W. Adair, Archie; G. F. Kelly, B. L. Phillips, Drexel; T. B. Todd, Adrain; L. L. Smith, Urich; J. H. Allen, Windsor.

W. L. VIERS, M.D., Secretary.

CLAY COUNTY MEDICAL SOCIETY

The June meeting of the Clay County Medical Society was held on Thursday, June 25, at the Odd Fellows Hospital near Liberty. A sumptuous "basket dinner" provided by the Ladies' Auxiliary was spread beneath a group of wonderful maples on the blue-grass coated hospital grounds. No less than forty-five participated, including Dr. C. C. Conover and Dr. and Mrs. Noah Adams, Kansas City. Dr. and Mrs. S. D. Henry, Excelsior Springs, were gladly-welcomed new members. Dr. Haynie Rowell, Kearney, has so far recovered from his distressing illness as to enable him to participate again, much to our pleasure. The Boy Scouts of the institution, as well as the genial manager and matron, did everything possible to make the society feel at home. We were glad to shake the hand of Dr. R. E. Sevier, Liberty, who has been absent from meetings for a long time, due to circumstances which may come to any of us.

The scientific session was opened in the sun parlor of the splendid hospital. Little Miss Crockett, of the institution, gave a delightful reading which brought a storm of applause. The Ladies' Auxiliary then visited the various departments, much to their delight, while Dr. Matthews, physician-in-charge, presented clinical cases of tuberculosis (incipient), diabetes, fibrosis of lung, and pemphigus. Dr. Conover gave stereopticon lectures on each case. Full discussion took place and many pertinent questions were asked. One of our members re-

marked that he could "get more out of our county meetings than from the state meetings."

We are sorry that some of our members are too busy to give us a half day for such study as this. They are the losers. Aside from these few, our interest was never better.

J. J. GAINES, M.D., Secretary.

GENTRY COUNTY MEDICAL SOCIETY

The monthly meeting of the Gentry County Medical Society was held in the office of Dr. A. W. Paulette, King City, May 19. At the same hour the business meeting of the Woman's Auxiliary was held at Dr. Paulette's home. At each meeting reports from the State Medical Association meeting were given by the delegates.

A delightful joint meeting of the two societies at Dr. Paulette's home concluded our meetings. We made merry with music. Delightful refreshments were served. Our acquaintance and fellowship are being promoted and the spirit of cooperation is felt.

Our meeting adjourned, praising Dr. Paulette and Mrs. Irwin as splendid host and hostess. Our next meeting is to be a picnic at Gentryville, June 16.

The following were present: Dr. and Mrs. G. W. Whiteley and daughter, Miss Ina, Dr. and Mrs. W. S. Campbell, Dr. and Mrs. J. N. Barger, Dr. and Mrs. T. E. Graham, Dr. Frank Rose, Mrs. Bickel, Mrs. F. P. Stapleton, and Dr. and Mrs. W. T. Martin, of Albany; Dr. and Mrs. T. H. McCaslin, Dr. and Mrs. J. A. Crockett and daughter, Miss Susie, and Dr. and Mrs. S. E. Simpson, of Stanberry; Dr. A. W. Paulette, mother and daughter, Mrs. Helen Irwin, of King City.

G. W. WHITELEY, M.D., Secretary.

MERCER COUNTY MEDICAL SOCIETY

At a meeting of the Mercer County Medical Society at Princeton, June 11, an election was held and the following officers were elected for the ensuing year: Dr. G. M. Bristow, president; Dr. C. R. Buren, vice-president; Dr. J. M. Perry, secretary and treasurer.

A date will be set for the regular monthly meetings as soon as the individual membership can be heard from, it being the desire of the society to fix a date that will be convenient for the attendance of all its members.

After listening to a talk by the President, Dr. G. M. Bristow, on "Professional Courtesies and Good Fellowship," the society adjourned, subject to being called at the will of the president.

J. M. PERRY, M.D., Secretary.

OZARK COUNTY MEDICAL SOCIETY

The physicians of Ozark County met in Gainesville, June 2, 1925, and organized the Ozark County Medical Society. Those present were: Drs. J. T. White, P. E. Bushong and H. E. Pace, of Gainesville; Dr. J. R. Davis, of Noble; Drs. E. H. Mitchell and C. F. Greene, of Bakersfield.

The following officers were elected: Dr. C. F. Greene, President; Dr. J. R. Davis, vice-president; Dr. J. T. White, secretary and treasurer.

The meeting adjourned, to meet in Gainesville, July 8, 1925.

CHAS. F. GREENE, M.D., President.

PETTIS COUNTY MEDICAL SOCIETY

The Pettis County Medical Society met in regular session at Hildebrandt's Cafe, at 6:30, Monday evening, May 18. Dr. D. E. Shy called the meeting to order. The following members were present: Drs. W. A. Beckemeyer, W. T. Bishop, Cord Bohling, J. W. Boger, W. L. Bradford, A. J. Campbell, J. B. Carlisle, M. T. Collins, D. P. Dyer, W. J. Ferguson, W. G. Jones, F. B. Long, J. G. Love, C. A. McNeil, A. E. Monroe, D. E. Shy, M. P. Shy, C. B. Trader.

Routine business was transacted after which the speaker of the evening, Dr. Herman E. Pearse, Kansas City, was introduced. Dr. Pearse spoke on the "Treatment of Fractures of the Femur." This was a very excellent paper illustrated by lantern slides and was highly instructive and greatly appreciated by all those present. A vote of thanks was given Dr. Pearse by the society.

There being no further business the meeting adjourned.

JNO. B. CARLISLE, M.D., Secretary.

ST. LOUIS COUNTY MEDICAL SOCIETY

The regular monthly meeting of the St. Louis County Medical Society was held at the home of Dr. and Mrs. J. H. Armstrong, Glendale, on Wednesday evening, June 3, at eight o'clock. The President, Dr. Otto W. Koch, called the meeting to order. The members present were: Drs. J. H. Armstrong, E. O. Breckenridge, Clyde P. Dyer, H. A. Goodrich, Garnett Jones, Otto W. Koch, Horine Miles, W. F. Mitchell, W. F. O'Malley, O. N. Schudde, J. A. Townsend, W. H. Townsend and R. A. Walther.

A very brief business meeting was held, the reading of the minutes of the last meeting being deferred until a later meeting.

The application of Dr. Armin C. Hofsommer, of Webster Groves, was read and referred to the membership committee for investigation and report at the next meeting.

A letter from Dr. C. H. Shutt, chairman of the hospital and clinic committee of the St. Louis Medical Society, asking that our society appoint a committee to confer with them relative to the abuse of the free clinics, was read. Dr. J. A. Townsend moved that a committee of three be appointed to confer with the St. Louis committee. This was seconded and carried and the president appointed Dr. W. F. O'Malley, Webster Groves, chairman; Dr. C. D. Potts, Wellston, and Dr. W. H. Townsend, Maplewood, on the committee.

On motion a rising vote of thanks was given Dr. and Mrs. Armstrong for their kind invitation and entertainment of the members of the society, the Woman's Auxiliary, and families at this meeting.

Dr. Armstrong introduced Mrs. Bessie Bown Ricker, who gave a most delightful group of readings during the evening.

Refreshments, consisting of ice cream with fresh crushed strawberries and an inexhaustible supply of all kinds of cake, were served. Punch was served during the entire evening.

All enjoyed themselves so much that it was a late hour before the last member had departed. We hope that we can enjoy the hospitality of Dr. and Mrs. Armstrong again.

CLYDE P. DYER, M.D., Secretary.

BOOK REVIEWS

A DESCRIPTIVE ATLAS OF RADIOGRAPHS OF THE BONES AND JOINTS. By A. P. Bertwistle, M.B., Ch.B., Leeds, F.R.C.S. Edin. Late Resident Surgical Officer, General Infirmary, at Leeds. New York. William Wood and Company. 1924.

When we consider the importance of the X-ray in modern medicine, and when we consider how great has been the distribution of X-ray machines to small practitioners throughout the country in the last few years, it is surprising how few good books one can find on this subject. The descriptive outline of "Radiographs of the Bones and Joints" by Bertwistle can be placed among the very few worthwhile books that we have in the diagnostic X-ray field.

The reproduction of radiographs so that they mean anything at all on the printed page has been one of the drawbacks, undoubtedly, to book production in this field. In the present volume, it is pleasing to notice that the reproductions are all good and can be studied as easily as can a good film. This is due to an entirely new process whereby a clean-cut silhouette is produced which, as the author states, "imparts a much needed reality to the radiograph without interfering with the best possible definition."

The book is divided into six parts, the first of which deals with the process of reproduction; the second takes up normal bones and epiphyses; the third is on fractures; the fourth on diseases of bones; the fifth on injuries and diseases of joints; and the sixth part includes miscellaneous conditions. It can be stated that the entire field of bones and joints is so well covered that this text must serve as a remarkably helpful guide to any practitioner who is doing X-ray work.

R. L. T.

THE TECHNIC OF LOCAL ANESTHESIA. By Arthur E. Hertzler, A.M., M.D., Ph.D., LL.D., F.A.C.S., Professor of Surgery in the University of Kansas; Surgeon to the Halstead Hospital, Halstead, Kansas, etc. Third Edition, with 140 illustrations. St. Louis: The C. V. Mosby Company. 1925. 272 p. Price, \$5.50.

In this new third edition on the subject of local anesthesia, the author, in his usual interesting manner, has presented the subject in a way which should be most helpful to the general surgeon. It is compact and very much to the point and on reading it, one is impressed with the conviction that the procedures have actually been worked out and perfected in the operating room.

As stated in the preface, he attempts to present the indications and the advantage of local anesthesia and he intimates, very wisely, that it is not to be undertaken as a stunt, without carefully considering the indications for its employment in each individual case. He proceeds in more or less detail, to describe the technic in a simple, clear-cut manner, for the more common operative procedures. A chapter is devoted to a discussion of the drugs commonly employed and those which he has found most useful; another to the technic of administration, which contains many useful suggestions gathered from a large experience. He advocates the use of the simplest apparatus and clearly shows that general anesthesia may be dispensed with in a host of surgical procedures. The numerous excellent illustrations prepared with careful attention to anatomical relations, make this a valuable hand-book.

From the standpoint of practicability and general usefulness the book fills a decided need and will doubtless stimulate the more general employment of local anesthesia.

A. O. F.

GYNECOLOGY WITH OBSTETRICS. A Text-Book for Students and Practitioners. By John S. Fairbairn, M.A., B.M., B.Ch. Obstetric Physician, St. Thomas's Hospital. Oxford University Press, 35 W. 32d St., New York City. 1925. Price \$8.00.

The prologue with which the learned author prefaces this interesting volume is worth the price of the book as a history of obstetrics alone.

The combining of obstetrics and gynecology into a single subject as it is being done in all the major schools makes it of peculiar value in teaching as well as in its practical use by the man in general medicine.

The arrangement of the diseases of the organs of reproduction is very complete and unique and the idea of Dr. Fothergill, of Manchester, is followed concerning pathology. That is why such descriptions are included as the student will find practical, the general subject of pathology being included in its own place in the college curriculum.

The physiology of reproduction is given more than the usual amount of space as Dr. Fairbairn holds that this important branch of teaching is almost entirely omitted from the early training of the student. The scheme of the book is to stress the necessity of keeping the process one of physiological rather than pathological condition. In other words, we are to practice preventive medicine. Prenatal care and maternal welfare, these familiar topics, come in for their emphasis. Then also in the study of the individual patient, particularly the influence of environment, of fatigue, the psychological element, because of their intimate relation to the sexual and reproductive functions and the difficulties associated with these functions, are given a most clear and convincing interpretation. None of the recent writings on the subject are more broad and cultural, at the same time practical and enlightening in all the various aspects of modern obstetrics.

G. C. M.

LA REACTION DE FIXATION DANS LA TUBERCULOSE. Par Achille Urbain. Preface de A. Besredka, professeur a l'Institut Pasteur. 1 volume de 132 pages. Masson et Cie, editeurs, 120 Boulevard St. Germain, Paris, Vie, France. Prix 12 fr.

This is a history of the development of the fixation tests for tuberculosis. The literature is well catalogued and the volume is worth studying for those who are trying to understand that method of diagnosing tuberculosis.

The theory and methods of Besredka are of course given precedence. Thus Besredka says in his preface, "given correct technique, the reaction gives a result that is almost 100 per cent. correct." But the author admits (p. 103) that the best may fail in cases of syphilis, malaria, diphtheria, and leprosy.

G. H. H.

INFECTION, IMMUNITY AND INFLAMMATION. A study of the Phenomena of Hypersensitiveness and Tolerance, and their Relationship to the Clinical Study, Prophylaxis, and Treatment of Disease. By Fraser B. Gurd, B.A., M.D., C.M., F.A.C.S., Montreal. St. Louis. The C. V. Mosby Company. 1924. Price \$5.00.

This volume is a compilation of the salient points in immunology from the clinical standpoint. It is an excellent book for students, and is well worth reading.

J. G. M.

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies
Issued Monthly under direction of the Publication Committee

VOLUME XXII

SEPTEMBER, 1925

NUMBER 9

E. J. GOODWIN, M. D., EDITOR
901 Missouri Building, St. Louis, Mo.

PUBLICATION } W. H. BREUER, M.D., Chairman
COMMITTEE } C. B. FRANCISCO, M.D.
M. A. BLISS, M.D.

ORIGINAL ARTICLES

ACUTE SURGICAL CONDITIONS OF GASTRIC ORIGIN*

A. E. HERTZLER, M.D.

KANSAS CITY, MO.

There are just two problems in perforating gastric ulcer; the diagnosis and the management thereof. The diagnosis is made up of two factors; the determination, by means of the history, of probable pre-existing gastric disease; and the clinical manifestations at time of perforation.

Now as to the history of preceding gastric disease there is a good deal of confusion. Between Monahan and Sippy the diagnosis of gastric ulcer has been tremendously balled up. Hunger pains and pains relieved by antacids do not indicate gastric ulcer more than one time in twenty. The swift and permanent relief obtained in most patients complaining of hunger pain, by antacids and diet, preclude any possibility of there having been present any real ulcer. The great frequency with which the symptoms are due to neurosis I think has been entirely overlooked. As a good working rule for out-patient practice, when you are confident you do not have a gastric ulcer, if antacid and diet do not relieve the condition, the proper thing is to switch to bromides. If the gastric pains disappear and the appetite improves with bromides gastric ulcer may be dismissed from consideration. One of the most important points in the whole diagnosis of gastric ulcer I learned, curiously enough, from an internist. The circumstances were something like this: Many years ago at the old Kansas City Club, I was speculating on a suitable menu for the evening meal, having had some of these symptoms of hunger pain. My colleague, Dr. Bohan, came over and seated himself beside me, his check, of course, unsigned. Having

cogitated on the phenomena disturbing my inner regions, I related them to him. He listened with more or less courtesy, and in his characteristic way he said, "By Gosh! You either have ulcer or bats!" That is a point well worth considering. When one is confronted with symptoms suggesting ulcer it is well worth considering whether or not the nervous system may not be playing the determining role.

When we consider the definite symptoms of ulcer, they are relatively few. The best guide, I should say, is pain coming after eating and going straight through to the back, particularly when this occurs in early morning hours. Vomiting of food with immediate relief from pain and the vomiting of blood are even more significant. Those symptoms, generally speaking, would indicate an ulcer. The ordinary epigastric pains are not sufficiently specific to give you any clue in the possible pre-existence of the ulcer when you come to diagnose an acute abdominal crisis.

Many patients with acute abdominal crisis have already undergone complete gastro-enterological studies. If there is definite food retention or obvious defect in the stomach wall the findings are of course significant. Positive diagnoses, however, are often made on wholly insufficient grounds. If the surgeon accepts the diagnosis as correct he is often misled into diagnosing an abdominal crisis as a perforating ulcer. As often as not the perforation comes without any previous history of gastric distress. It is important, therefore, not to place too much stress on the history of previous stomach disturbances. So many other diseases find expression in gastric disorder.

Helpful as history may be, the real problem must be settled when one faces the patient. There is nothing more typical than a recently perforated gastric ulcer—nothing probably in the whole field of medicine that is so typical. No other disease has called forth so many superlative adjectives in so many different languages as the acutely perforated gastric ulcer. If one sees the patient when the ulcer is in the act of perforating, the picture is not to be forgotten. The paroxysm of pain calls

*Read in the symposium of Acute Diseases of the Upper Abdomen before the 68th Annual Meeting of the Missouri State Medical Association, Kansas City, May 5, 6, 7, 1925.

forth the most anguished wails. The lined face, the beaded forehead, the cold extremities are mute evidence of extreme suffering. This

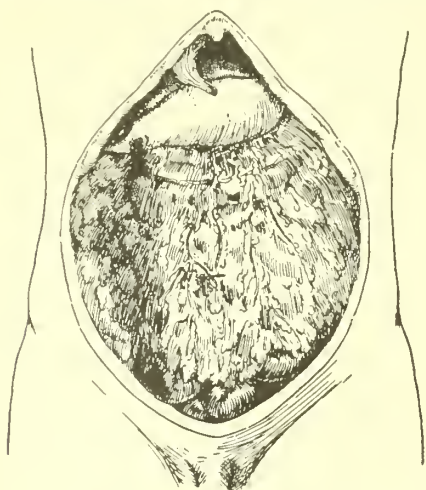


Fig. 1. Escape of the stomach contents flowing over the great omentum which protects the intestines lying beneath. (From Hertzler's Clinical Surgery by Case Histories. C. V. Mosby Company.)

part of the picture, however, may have passed before the surgeon sees the patient. Usually the patient has received repeated injections of morphine so that the main picture is obliterated. It is, therefore, necessary that a careful history of the sequence of events be obtained. Usually the proper diagnosis is dependent on a correct interpretation of the history.

The fundamental principle in acute abdominal crisis to be remembered is that the point of trouble is where the greatest pain and tenderness is. In ulcer the site of pain is where the gastric contents come in contact with the parietal peritoneum. The pain is not diffuse but is localized as if there was a stabbing and cutting.

Here comes the chief confusing thing, and the point I want particularly to emphasize, and that is, the shifting of the point of tenderness. Supposing the perforation is in the anterior wall of the stomach, the descending contents of the stomach slide down over the small intestine over the great omental roof (Fig. 1) so that the irritating substances reach the space over and lateral to the colon and down into the pelvis. (Fig. 2) Therefore, if the history of the first acute symptoms is overlooked, or if you see the patient a day late, you may find most irritation in the appendiceal region or in the true pelvis.

I mistook an acute perforation for an ovarian cyst with a twisted pedicle. The patient gave a history of severe pain four days before, and the whole pelvis was filled with a globular mass that looked like a tumor sur-

rounded by adhesions. The patient died before an operation could be performed. A definite history was obtained after autopsy and it was discovered that the primary pain four days before was in the epigastrium.

What are you going to do about it when you have made a diagnosis, is of course, relatively simple; to find the hole and cover it up the best you can, with or without the aid of omental graft as the case may be, and establish drainage if needed.

The question that frequently comes is how much one should do—whether or not to follow Deaver and do the gastroenterostomy or be content with closing the opening. As far as I can see, the question can be solved like this; if a large ulcer is present, showing obstruction to the duodenal outlet, before or after repair, do a gastrotomy. If you can repair the opening without closing the outlet too much, for the most of us, it is better policy to drain and leave it alone after the repair has been made.

The real problem is to drain properly. If the operation is early and the contents have not escaped far from the stomach, a simple drainage is perhaps sufficient. However, one should assure himself that the escape has not extended beyond this. If the drainage has extended beyond the point of perforation, as it nearly always has, one should drain lateral to

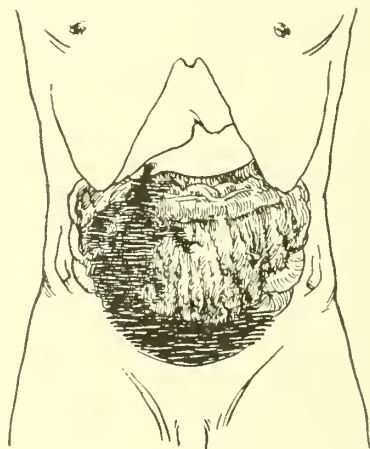


Fig. 2. The stomach contents reach the space lateral to the ascending colon and the pelvis. (From Hertzler's Clinical Surgery by Case Histories. C. V. Mosby Company.)

the colon or just about the anterior superior spine or even the true pelvis if the exudate has reached so far, which is apt to be the case if the perforation has occurred as much as twelve hours before. The site of repair of the ulcer does not require drainage and is apt to interfere with the healing of the sutured tissues, thus inviting a discharging sinus.

ACUTE SURGICAL CONDITIONS OF UPPER ABDOMEN OF PAN- CREATIC ORIGIN*

EDWIN LEE MILLER, M.D.

KANSAS CITY, MO.

Acute conditions affecting the pancreas may represent the most serious lesions occurring within the abdomen. Moynihan has said that acute hemorrhagic pancreatitis is the most serious condition an abdominal surgeon is called upon to treat.

Acute pancreatitis is a comparatively rare disease. It affects men more commonly than women. It attacks obese individuals; particularly fat people who have, or have had, gallstone disease.

Acute pancreatitis is difficult to diagnose, particularly if the observer has never before seen a patient suffering with this affection. Even after a patient succumbs to the effects of this disease a careless necroscopist may overlook the pancreatic location of the patient's pathological findings. Many individuals who suffer terribly suddenly after a heavy meal, or after an all night's debauch, die of this disease. That their certificates are signed acute indigestion is no credit to their physician's diagnostic ability. There is no such condition as acute indigestion. Therefore it can not cause death.

That the pancreas was the seat of an acute fulminating lesion that bled and caused death was mentioned by Rotinsky in 1863. Klebs described a similar condition affecting the pancreas in a patient he had treated in 1869. It remained, however, the fortune of Professor Fitz, of Boston, to write exhaustively and intelligently of the clinical manifestations of acute affections of the pancreas. His first article appeared in 1889. His exposition of this subject constitutes one of the classics of diagnosis contributions to American and world medical literature. The classification therein presented by Fitz of the pathology of acute pancreatitis has ever been the basis for discussion of this disease.

CLASSIFICATION

Fitz classified acute pancreatitis under three heads, according to lesion presented and sequence of associated symptoms and findings. There is (1) acute hemorrhagic pancreatitis, (2) gangrenous pancreatitis, and (3) suppurative pancreatitis.

Fitz recognized that there was still another condition affecting the pancreas wherein blood extravasation was a factor present but the symptoms were in no wise comparable or re-

lated to the condition he designated acute hemorrhagic pancreatitis.

Acute hemorrhagic pancreatitis occurs, says Fitz, most frequently in those individuals who have had previous attacks of gastroduodenal dyspepsia. It begins with an intense pain in the upper abdomen, followed by vomiting and not infrequently swelling with tenderness and obstinate constipation. The temperature is normal or subnormal.

Symptoms of collapse quickly ensue and precede death, which occurs between the second and fourth days.

The pancreas is found enlarged and its interstitial substance, as well as the tissues in the neighborhood, infiltrated with blood. Microscopic examination shows the presence of cellular and fibrinous exudate together with necrosis of the parenchyma. In the fat of the omentum are disseminated areas of fat necrosis.

Gangrenous pancreatitis is usually the projection of a similar but less serious cellular affection than acute hemorrhagic pancreatitis. Gangrenous pancreatitis proves fatal at the end of several weeks or a few months. The affected organ is enlarged, often soft and friable, and often of a mottled red, gray or black according to stage of progress attained before death. By a continuation of the process affecting the tissues thereabout the organ may undergo almost complete sequestration. Super-added infection is an aid in the causation of a peritonitis in the lesser peritoneal cavity, which cavity may become a sealed sac of pus, blood and necrotic material containing shreds of pancreas suspended in the immense pus-filled sac. Communication may be effected with hollow viscera. Even parts of the cast off necrotic gland may be passed through the rectum (as in a case observed by Chini). Fat necrosis is an invariable concomitant.

Suppurative pancreatitis resembles the suppurative process affecting any parenchymatous organ. The gland may contain numerous small abscesses or be converted into one mass of abscess. This type, says Fitz, usually runs a chronic course—weeks or months may transpire before death. Fat necrosis is not often present.

That the suppurative pancreatitis of Fitz is a terminal condition of a lesion we have called acute inflammation of the pancreas, where the affection is mainly interstitial and the glandular necrosis is not so evident and fulminating, there is, I hope, little doubt.

CAUSE OF PANCREATITIS

The work of Fitz crystalized the attention of the medical world. Immediately there

*Read before the 68th Annual Meeting of the Missouri State Medical Association, Kansas City, May 5, 6, 7, 1925.

started an intense study of the cause, particularly of acute hemorrhagic pancreatitis. The experimental world became active, and still is, in formulating reasons for as well as denying the scientific stability of each scientist's conclusion.

First Opie and then Flexner in this country; then Thirolic in France; Hlava in Bohemia; Hess, Guloske and Polya in Germany, demonstrated substances that if injected into ducts of pancreas, particularly in certain amounts, would be followed by the initiation of acute hemorrhagic pancreatitis. Professor Opie made certain observations in the post mortem examination of patients dying of this disease. In the first five cases he observed he found gallstones associated with the pancreatic lesion. In each instance he found a small migratory gallstone had been impacted in the papilla of Vater. He observed that the duct of Wirsung contained bile stains. That gallstone obliteration of the outlet of the common and pancreatic duct in persons in which these ducts had a common papillary outlet was the causal factor of this serious condition, he felt was hereby proved. To further confirm the correctness of his opinion he injected bile into the pancreatic ducts and the animals so treated invariably died of acute hemorrhagic necrosis of the pancreas. The problem seemed solved, but it was not. Presently the necroscopist began to find cases of the disease without stone being present in the papilla. Then the experimental race for explanation of this pancreatic condition was on again. Flexner confirmed Opie's findings that bile would cause pancreatitis if it was placed in the pancreatic duct but that it was the bile salts, particularly sodium taurochlorate that was the offending agent. Then it was found by Guloske and Sailer that gastric juice, that olive oil, that most any material save mucin and glycerin, if injected into the pancreatic duct, would cause acute hemorrhagic pancreatitis.

To prove that the process of degeneration in the organ was due to trypsin digestion Polya injected duodenal secretion into the bile ducts in a manner similar to the method used by Opie, Flexner, and others. He reasoned that since the pancreas normally contained no trypsin but the secretion of gland did contain trypsinogen, the introduction of the duodenal secretion containing enterokinase would account for the biochemical changes noted in the gland structure during an attack of acute hemorrhagic pancreatitis. He succeeded in proving that unheated duodenal content would cause the condition of hemorrhagic necrosis of the pancreas if injected in pancreatic duct.

Not to be outdone by the experimental searchers the clinical surgeons began to philoso-

phize on the facts necessary to produce acute pancreatitis. Hofer said the affection was due to infection and stagnation of bile. Schewiezer ascribes it to colloidal deficiency in the secretion in the pancreatic ducts. That the muscle of Oddi through sphincteric spasm could cause the disease has been advanced by some writers. That extension of infectious processes from the duodenum, gallbladder tract and appendix was not unproved as a cause was a theory advanced by Deaver. That either or several or all of the factors might be a causal factor cannot be disproved, nor proved. To prove that the whole had not been written on this subject four migratory round worms insinuated their curious noses into the pancreatic ducts of their four hosts, and these hosts died of pancreatitis. There is no end of causes for the production of the condition we call hemorrhagic necrosis of the pancreas.

We do not know why the condition of acute pancreatitis is so fatal. The most plausible words expounded say that a pancreatic enzyme, increased in activity by the presence of bile salts, acts upon the substance of the gland producing them, liberating products which are quickly absorbed and are highly poisonous.

SYMPTOMS

Two outstanding findings characterize the features observed in a patient's suffering from hemorrhagic necrosis of the pancreas. The pain is terrific. It is agony. A grain of morphine must be administered to control such a pain. It is mid-epigastric and extends from the head to the tail of the pancreas. The muscle spasm reaction is more localized than that observed in patients having peptic ulcer perforation. The facies of the patient with acute pancreatitis is the typical facies of shock. It is drawn, hagard and the lips are blue or ash colored. The brow is covered with sweat. The patient is doubled up and tosses about all over his bed. When quieted by morphine his pulse rate is from 140 to 160. The leucocyte count is not characteristic; it varies from 8,000 to 40,000. Tenderness over area affected by muscle spasm is of the severest degree even after morphine has been given. The patient is one of the sickest patients you are ever called upon to treat. Unless you are alert and give morphine in large doses the patient may succumb to shock in but a few hours. One such untreated case died before I reached him, four hours after attack started.

Even in well treated patients who have acute pancreatitis the prognosis is very grave. Very few such patients survive severe acute pancreatitis attacks. Those that do recover have their relief from the administration of morphine which may relax the duct and permit

factors initiating their attacks to pass into the duodenum and early operation is performed. Early operations surely have their indications and results satisfied in the treatment of acute pancreatitis.

TREATMENT

Probably the best method of treatment of acute pancreatitis is that which relieves all conditions that have been found to be associated with the disease before the attack of pancreatitis arrives. Chronic cholecystitis, chronic duodenal and appendiceal lesions should be removed when diagnosis can be made. Practically all patients that die of acute pancreatitis are examples of what is commonly called chronic dyspeptics.

That acute pancreatitis is a very fatal condition a record of my own experience will show. I have operated upon five patients with hemorrhagic necrosis of the pancreas. Four cases died. In four instances I have been called to operate upon patients who had, or were dying of, the disease when I arrived at the bedside. Three times I have been consultant in cases of so-called acute indigestion where the patients have refused operation for religious reasons. Unrelieved pain was followed by death within one day. No necropsy was held and the diagnosis of acute indigestion was given as the cause of death by the attendant in charge. The symptoms and findings presented were those of hemorrhagic necrosis of pancreas.

I have had this year two cases of acute pancreatitis. Both were up for operation on the same day. One patient presented the only instance of gangrenous pancreatitis I have seen. The other patient died five hours after entrance to hospital. She was in a dying state when she arrived and no operation seemed advisable.

One of my patients suffered from suppurative pancreatitis as described by Fitz. In all, eleven proved cases have come to my notice, hence I can assume that acute pancreatitis is not so rare as an acute condition affecting the upper abdomen.

In the five instances of hemorrhagic necrosis of pancreas operated upon, all patients presented the awful pain, facies, temperature and physical findings I have already described. All showed foci of fat necrosis. In each instance the pancreas was markedly but symmetrically enlarged. It was red and the abdomen contained blood-stained serum. One patient recovered and is well seven years later.

The fortunate man was thirty-eight years old. His attack was three hours old when he was operated upon. His gallbladder was filled with small stones. One small stone was found in an enlarged common duct. It was not in the

diverticulum of Vater. He was not jaundiced. I removed the stone from the common duct. I removed the stone filled gallbladder and drained the common duct through the cystic duct. I drained the lesser peritoneal cavity. Convalescence was stormy.

The operation was the most traumatic I have used in treating any of my cases with this disease. The man was operated early in attack, and to this fact alone have I credit for the relief of any case of hemorrhagic necrosis of the pancreas. Of those patients who died after operation the excuse for their death lies in late operation. They were operated on during the third and fifth days of their attacks.

A forty-eight year old man was in the third day of an acute attack of hemorrhagic pancreatitis. He had the usual red, enlarged pancreas with blood-stained serum, foci of fat necrosis. The common bile duct was distended and contained a stone in its middle portion. The gallbladder was filled with stones. I opened the common bile duct, removed stone from middle of duct. A probe located stone in ampulla of Vater. I could not dislodge it without great hazard, hence elected drainage of common bile duct, hoping later to perform transduodenal removal of stone in papilla. Drainage of lesser cavity and pancreatic capsule was made. Patient died in twelve hours of progressive toxemia. The operation was designedly short; thirty minutes were used in its performance.

A man of sixty had had acute pancreatic symptoms for five days. Local anesthesia was used as his condition was wretched and a very large, globular-shaped gallbladder presented below the tenth rib. Abdominal section showed an enlarged pancreas that simply could not be touched and with fat necrosis widely scattered. One large stone was removed from a very thick-walled, markedly distended, tense gallbladder. Large tube was tied in fundus of gallbladder with purse strings of No. 2 chromic catgut.

The patient did well for five days. He was now hungry and the pancreas was not nearly as tender. I dressed his wound at eight a. m. on the fifth day. It was clean and the skin appeared normal. At ten a. m. he turned in bed and felt a pain in his incision. The pain was of a burning character. It grew worse, and finally his nurse noted his dressing was saturated with bile. Upon lifting dressing and exposing wound to the air the man went into agony. The whole area related to the abdominal dressing was ham red and bleeding; exposure to air caused even more agonizing pain. Zinc oxide ointment was applied and was dissolved as if it was water. So a dressing to exclude air was placed over affected area, and five-minute syringe suction, though laborious,

was started. The patient gradually went into a deep shock and died eight hours after the tube slipped away and ten days after attack started and operation.

That the bile tract can drain pancreatic secretions is proved by this experience. That catgut is not sufficient to hold tube is likewise proved. I have always felt that this man had a fine chance for recovery from pancreatic lesion.

Mrs. H. had an acute attack for three days. She was very ill. Gas oxygen was given for anesthesia. The pancreas was the largest I have observed. It was truly ham red and so shown through a thin, gastrocolic omentum. Fat necrosis was evident everywhere in upper abdomen. The gallbladder was normal. No stones were felt in bile ducts. We sewed the abdominal wall down to anterior surface of pancreas which had been exposed through the gastrocolic omentum. We incised the capsule in several places and surrounded gauze with rubber dam after the method of Coffey's coffer-dam. We drained the gallbladder. The patient looked well for a few hours. She later collapsed and died.

In the fifth case a man had many very small stones in gallbladder and two in common duct, one of which obstructed the papilla of Vater. I opened common duct and extracted the high lying stone and pushed the second lower placed stone through the papilla of Vater with a forceps. I drained common duct and gallbladder. I was elated in this operative success. It occurred early in my acute pancreatic experience. I did this operation in forty-five minutes but the patient died next day in toxemia and shock.

Operation done during the height of attack of acute pancreatitis did not, after these experiences, make much appeal. I tried to wait out the next case of this disease. I believe, and know, persons do have acute attacks of pancreatitis and recover after the quick administration of morphine, hence I adopted the policy of watchful waiting as we have found valuable in some cases of acute cholecystitis already sick for many days when first observed.

This year two cases came into my service at the General Hospital. They were up for operation the same day. The first was a woman of sixty years who entered hospital for operation on a diagnosis of intestinal obstruction. She was prepared and on table when I arrived. She had not vomited for three days. No visible peristalsis was evident. In short, she did not present the picture of intestinal obstruction. She had acute pancreatitis. She was apparently getting better. So why operate? Others had not done well under similar conditions.

One of my associates, whom I respect very much, made a diagnosis of acute peptic ulcer perforation and advised operation at once. We waited, however, as I talked faster, and even these pancreatic patients seem to enjoy escape from operation. Symptoms progressed well for ten days, then temperature began to rise daily. Operation was accepted. The patient had acute pancreatitis with all its pathological findings, but she also had a communicating hole in the anterior wall of her duodenum. This occurred, I feel sure, simply to justify the diagnosis of my more able confrere. This rent was covered by the fat of the falciform ligament of liver. It was an irregular ellipsoid shaped erosion, two inches long and one inch wide. From the disposition of the tissues the duodenal wall had been eaten through from the peritoneal surface by pancreatic ferments. I closed the duodenal rent. It was a difficult maneuver to perform. I drained her stone-filled and distended gallbladder and placed drains in the lesser peritoneal cavity.

The duodenum did not leak. The patient improved remarkably after first few days of storm. Then she ceased to have an appetite, and what she did eat had no effect. She lost weight rapidly. She vomited, then finally developed a diarrhea. The rectal discharges simply burned up the neighboring skin. She died six weeks after her operation.

Autopsy showed many adhesions and a gangrenous pancreas. There was now a communicating opening from pancreas to the transverse colon. The diarrhea and irritable discharge was similar in action to the man's case I have already mentioned.

So I find that the watchful waiting game for management of acute pancreatitis is not always the successful method to adopt.

I have had one case of suppurative pancreatitis. The patient died the fourth day of attack, and second after operation. The pancreas was riddled with small abscesses.

I have not included instances of a pathology of enlarged and inflamed pancreas which is usually associated with gallstone disease. Fat necrosis is not present. Operation in the bile tract usually relieves these patients. I have had ten such cases, eight have recovered and two are dead. These two patients died of hepatitis in one instance, and the cause was undetermined in the other. This last group of pancreatic affections are better called subacute pancreatitis.

Truly, gentlemen, Moynihan was right when he stated that acute pancreatitis is the most serious condition the abdominal surgeon is called upon to treat.

SURGERY OF ACUTE DISEASES OF HEPATIC ORIGIN*

ROBERT D. IRLAND, M.D.,
KANSAS CITY, MO.

No surgical procedure is rational or serviceable unless it is based upon physiologic principles and deviations from those principles as found in disease. Nowhere in the field of surgery is this fact so preeminent as it is in the treatment of diseases of the liver and biliary tract. The physiology of these organs is so important to the health of the individual that it is not strange that disease of them should have such varied and serious symptomatology, nor that our treatment of these diseases should so often give less than satisfactory results.

Among the acute surgical diseases of hepatic origin nothing is of much interest except traumatism, abscess, and the acute inflammatory diseases of the extrahepatic bile tract. Rupture of the liver may occur without penetration of the body wall; usually however the impacting object penetrates and gives a definite guide for surgical attack. Stab and gunshot wounds furnish a large majority of these cases all of which demand the earliest possible exploration. Hemorrhage always occurs and is commonly, though not necessarily, fatal. Evidences of healed rupture, and masses of liver tissue surrounded by and healed into the omentum have been found. When shock is severe one hesitates to undertake any kind of operative attack but in this situation no other form of treatment offers much hope and we are compelled to take the forlorn chance. Incision is made in the region of the wound and the liver is explored. The hemorrhage is controlled by ligation of the larger vessels in the field, suture of the liver, gauze pack, or by a combination of these methods. It is to be remembered that compression of the large vessels as they pass to the liver through the gastrohepatic omentum will control the bleeding and permit a satisfactory exploration of the liver wound. Catgut sutures including the liver capsule may be satisfactorily placed with a specially devised needle.

Abscess, unless it is caused by infection of an echinococcus cyst, is usually multiple. Echinococcus cysts and amebic abscesses react more like neoplasms than abscesses caused by pyogenic organisms. They give symptoms by reason of a considerable destruction of liver tissue and the production of a toxic substance. They may undergo spontaneous healing or may rupture into adjacent structures; as

they commonly develop in the dome of the liver, rupture through the diaphragm into an adherent lung may occur. The surgical treatment is limited to drainage. The mortality is high.

Abscess of bacterial or mycotic origin usually is secondary to infection of some portion of the intestine, most commonly the appendix and cecal regions. Infective thrombi occur in radicles of the portal vein and suppurative pyelphlebitis extends to the portal branches in the liver. Abscess may be caused by the infection of stagnant bile in obstructive jaundice, gastric or intestinal ulceration, ulcerative endocarditis, empyema, ear abscess, typhoid fever or yellow fever.

The diagnosis of this lesion is difficult if the abscesses are small or centrally located; but if they are fairly large and superficial it may be relatively easy. In the latter case drainage by aspiration or incision must be undertaken; but as it is seldom possible to drain all the foci the results are usually unsatisfactory. If puncture is employed one should be prepared to drain by incision. Vaccines are a rational supplement to drainage and have been known to complete a cure.

The commonest lesion of the liver and biliary tract is inflammation due to infective organisms transported by the blood stream through the hepatic artery and the portal vein. The so-called ascending infection from the duodenum through the common duct and upward to the gallbladder and liver probably never occurs except in the presence of stasis of the bile stream. The blood-borne infection usually originates in the intestinal tract. Deaver asserts that the appendix is the most common focus. Rosenow has quite definitely proved that the streptococcus originating in some distant focus, such as the tonsil or a periapical granuloma, is responsible in many cases. Among other causes miliary tuberculosis, pneumonia, endocarditis, and influenza may be mentioned. The frequent incidence of repeated pregnancy in the histories of gallbladder and bile duct disease is to be noted, the disease resulting from bile stasis due to pressure upon the ducts by the enlarged uterus, plus the presence of an appreciably increased cholesterol content in the blood during pregnancy.

The diagnosis is not always easy for in this region of the abdomen are several organs which frequently are the seat of acute lesions producing similar symptoms. Appendicitis, pancreatitis, pylorospasm, gastric or duodenal ulcer, and renal calculus have usually to be differentiated from it.

The outstanding evidences are pain, nausea,

*Read in the Symposium on Acute Diseases of the Upper Abdomen before the 68th Annual Meeting of the Missouri State Medical Association, Kansas City, May 5, 6, 7, 1925.

vomiting, fever, tenderness and rigidity of the upper right rectus muscle, and jaundice if there is obstruction of the common or hepatic ducts. In rupture of the gallbladder there is intense sharp pain, shock, jaundice and increasing accumulation of fluid in the abdomen. The pain is due to the attempted passage of stones or thickened mucus through ducts whose lumens are too small. It may be so severe as to produce fatal shock. If the cystic duct is blocked the pain is referred to the back and into the right scapular region; but if the common duct is blocked the pain usually is referred to the back or to the epigastrium. Epigastric pain occurs first followed by radiation into the right hypochondrium and back. It stops when the mass passes. Nausea and vomiting are severe and are not relieved by taking food. Fever may be absent and except in the most violent attacks is seldom 102 degrees. Tenderness in the gallbladder region is marked and there may be a board-like rigidity of the entire abdominal wall; but usually the right rectus muscle is definitely more rigid than the rest of the wall. Jaundice occurs as a result of blocking of the common or hepatic ducts and may not be present at the beginning of the attack. It usually appears in the first twenty-four hours and deepens rapidly if the obstruction is complete and persists. The presence of bile in the urine and its absence from the stool are coincident phenomena. If the cystic duct is blocked by a large stone it may compress the hepatic ducts and cause jaundice.

To decide whether medical or surgical treatment should be employed in a given instance demands the exercise of good clinical judgment. As is true of other acute inflammatory intra-abdominal lesions, there is a growing reluctance to use immediate surgical measures for the reason that this plan too often has been followed by disastrous results. In these cases medical consultation is of great value; and it is my belief that it is better to employ medical means for the immediate control of the symptoms. Operation may be done afterwards with a greatly reduced danger of fatal result.

The pain can be controlled by heat applied externally and internally (hot drinks). The value of heat is not sufficiently appreciated by many physicians and much unnecessary dosing with opium and its derivatives is done. In the more severe cases opiates are necessary but they should not be used unless heat fails. Heat also relieves shock. Nausea and vomiting are controlled by gastric lavage. In all but the most violent instances these simple measures plus rest in bed will control the attack, which may be further modified by the administration of ox-gall or bile salts and a dietary largely vegetable in character, limiting fats, carbohy-

drates, proteids, and the amount of food taken at one time. Saline laxatives, especially sodium phosphate, and a proper quantity of water modify the fluidity, alkalinity and rate of flow of the bile with a tendency to improvement of symptoms. Such treatment usually tides the patient over the attack and for that reason the surgeon relatively seldom sees a case in which there is not a history of one or more similar attacks. The usual story is that of long continued digestive tract disturbance with frequent fairly typical paroxysms.

In the occasional instances where medical measures fail and immediate operative interference is necessary the surgeon is warned by the old dictum regarding all acute surgical diseases—"It is easy to do too much." The question whether to remove or to drain a gallbladder does not enter into this problem. It belongs to the domain of chronic infection. In the acute disease the patient is sick because his liver is inflamed as a result of biliary stasis and infection. The surgeon's problem is to overcome the stasis and this may be done only by drainage. If the obstruction is in the cystic duct, drainage of the gallbladder with removal of the obstructing object will suffice; but if it is in the common duct and cannot be forced backward into the gallbladder or forward into the duodenum the duct must be opened.

It is not my desire to leave with you the impression that all acute cases are cured by drainage. They are not. In some instances a secondary operation is necessary. But fewer deaths will result if the operator is content with a drainage procedure in these violently acute cases; and he will often find that this simple plan results in complete and permanent cure. Some of the master surgeons seem to be able to do pretty nearly what they please in an acute inflammatory field without placing the patient's interest in jeopardy; but for the rank and file of surgeons the conservative plan gives more satisfactory results. We would do well to reserve the radical measures for the chronic cases in which the liver function is not so greatly disturbed.

1010 Rialto Bldg.

BIBLIOGRAPHY

- MacCallum. *A Textbook of Pathology* (Second Edition). W. B. Saunders Co., Philadelphia, 1920.
 Rost, Franz (Translated by S. P. Reimann). *The Pathologic Physiology of Surgical Diseases*. P. Blakiston's Son and Co., Philadelphia, 1923.
 Bickham. *Operative Surgery*. Vol. IV. W. B. Saunders Co., Philadelphia, 1924.
 McArthur in Binnie *Regional Surgery*. Vol. 11, 315. P. Blakiston's Son and Co., Philadelphia, 1917.
 Tice. *Practice of Medicine*. Vol. VII, 59. W. F. Prior & Co., New York, 1920.
 Johnson. *Collective Review, Function of Gallbladder with Special Reference to the Meltzer-Lyon Test*. Surgery, Gynecology and Obstetrics. *International Abstract of Surgery*, 1922, Vol. XXXIV, 177.
 Neff. *Collective Review, Surgery of the Gallbladder and Bile Tract*. Surgery, Gynecology and Obstetrics, *International Abstract of Surgery*, 1919, Vol. XXVIII, 1.
 Warbasse. *Surgical Treatment*. Vol. II. W. B. Saunders Co., Philadelphia, 1918.

INTRATHORACIC LESIONS SIMULATING ABDOMINAL CONDITIONS*

J. Q. CHAMBERS, M.D.,
KANSAS CITY, MO.

The close automatic relationship of the lower thoracic and upper abdominal viscera, lying as they do in immediate juxtaposition, accounts for much confusion in the interpretation of symptoms referred to this body region. However, there are instances of organs of the thorax and abdomen not in close apposition, whose maladies are mistaken one for the other. The importance of this diagnostic dilemma is magnified by the fact that a surgical procedure of one kind or another is usually pending. Misjudgment here is frequently fatal, for one has not the chance to retrieve an error as often happens in problems that are wholly intra-abdominal. Indeed this readiness with which the diagnosis and operation, within the belly, may be changed after an opening is made, has rendered surgeons generally careless and indifferent to diagnostic differentiation. A surgical condition exists therefore operate, is the dictum. Why quibble? A few knife strokes will tell more than hours of study and consideration. The evil influence of this habit shows itself in glaring proportions when some thoracic condition intervenes, for here too, with equal abandon, the belly may be opened. The chest has been disregarded as a possible factor or source of trouble.

From a practical viewpoint, as seen from the work of the general practitioner at the bedside, these cases of confusion array themselves into four groups, examples of which will be cited.

GROUP I.

The angina-gallbladder-acute-indigestion group, in which the aberrant or less typical forms of angina pectoris are regarded as seizures arising in the stomach or gallbladder, being accordingly called biliary colic, gastritis or acute indigestion. The real character of the malady is often first suspected when the patient, in the midst of one of his so-called "spells," suddenly expires. Aside from the organs of this group lying in close proximity, there are other factors in this lack of interpretation.

1. Angina attacks are prone to occur when the stomach is more or less heavy with food.

2. Partial relief often ensues after vomiting or eructations of gas.

3. Exhibition of ordinary carminatives such as soda, aromatic spirits of ammonia, and Hoffman's anodyne, often afford relief.

4. That very interesting corelationship existing between chronic gallbladder disease and myocarditis, a condition long ago stressed by Babcock and a favorite concept with our good friend Sloan. Here the attacks may alternate or merge from a gallbladder under tension to the more grave condition of threatened or actual angina. Quite interesting is the relief of cardiac distress which may follow gallbladder surgery in selected cases.

CASE REPORTS

Case 1. A judge, 65 years of age, finds that for several months recurring attacks of epigastric distress are interrupting his work. Various stomachics had given brief relief to his so-called stomach trouble. Blood-pressure, a quickened pulse, a faltering myocardium and above all, the story that these attacks were apt to be provoked when climbing stairs, stamped the case as one of angina. Some months later his exitus in the midst of an attack was not unexpected.

Case 2. An emergency visit to relieve an attack of so-called colic, to which this heavy-set woman of 60 was subject. Vomiting had occurred and a few innocent green beans in the vomitus were blamed for the upset. Again the cardiac examination with the disposition of the pain to enter the neck and run to the arm, suggested the gravity of the situation. Her death occurred a few days later in a similar seizure.

Case 3. A neighbor, a man of 60, habits regular, could be seen each morning walking to the car. Of late his pace had visibly slackened. He looked older and showed fatigue. Baggy welts developed beneath his eyes. His skin was taking on a grayish pallor. He was given, by his physicians, an exhaustive gastro-intestinal examination with diet and prescription following. Why? Because each morning after breakfast on his walk to the car he felt substernal or epigastric pressure. One day at noon while sitting talking to his son he suddenly expired. His physician demurred at the diagnosis of angina as the cause of death, because forsooth severe pain was not the custom in his attacks, nor had he evinced pain at the time of his death. Be it remembered that some of the most deadly instances of angina are not marked by pain and comprise the class of "angina sine dolore."

Case 4. A woman of 76, under my observation and care for a number of years, gave a history of attacks of gallstone colic beginning some forty years previously in the midst of her child-bearing period. Of late two or three typical attacks of biliary colic had occurred. Complicating this however were other features. She was plainly breaking; she was losing her wonted keen interest in affairs generally. Her blood pressure was elevated. Most suggestive was the story that each day as a part of the reaction in the midst of or after her bath, she felt a vague distress beneath the sternum. The ominous complex of the situation was explained fully to the various members of the family. Without my approbation or even my knowledge, this woman was taken down town for an extensive gastro-intestinal fluoroscopy. That night she had a seizure and died.

In these last two cases the characteristic history of the occurrence of the pain on effort

*Read in the Symposium on Acute Diseases of the Upper Abdomen before the 68th Annual Meeting of the Missouri State Medical Association, Kansas City, May 5, 6, 7, 1925.

should have had more weight with their physicians. As a rule such a story is pathognomonic.

Case 5. A man of 65 or 70 is suffering with great abdominal distress. Fever is present. Rigidity marks the upper right quadrant of the belly. A smooth, globular tender mass occupies the position of the gallbladder. His pulse is rapid and irregular. His heart sounds are lessened in tone. Pain radiates to his neck and arms. Relieved by morphine, a few hours sufficed for a renewal of the syndrome. In this recurrence he perished. This apparently was one of the closely related cardiac or angina gallbladder cases.

Case 6. A woman of 60 had been observed for some years past as an example of cardiovascular disease with a tendency to overweight. There had been no unusual difficulties in her case since her weight was easily controlled and her blood pressure could be kept about 170. In this period she had one definite seizure of gallstone colic. In 1919 she became acutely ill with a respiratory infection, presumably influenza, marked by a distressing broncho-pneumonia, pleurisy, and considerable gastric unrest. After 10 days or so this grippe-like illness, vomiting became persistent and grave. Her heart was much agitated. In the region of her liver was much congestion and tenderness. For a week matters progressed in every way unfavorably. At this juncture, remembering her attack of gallstones and impressed by the prominent symptoms pointing to the gallbladder, I asked for surgical help. From my confere I got no comfort, he declining to operate for two reasons: first, operation would be fatal; second, the condition was not a surgical one. Either of these reasons would ordinarily have sufficed as a contra-indication but the patient was growing worse and begged constantly for relief. Vomiting and epigastric distress were intractable. Her blood pressure was now 280 while her heart was in such perturbation that one consultant pronounced the condition as acute thyrotoxicosis. The only way to get this woman operated on was by some underhand method. Accordingly a younger surgeon was beguiled into the undertaking, assuring him that in the event of failure the responsibility would not be his. The gallbladder under tension was emptied of its thick, tarry bile, plus four or five concretions of the jack-stone type. Vomiting ceased, the blood pressure dropped from 280 to 180. The heart regained its tone. Convalescence and recovery were rapid. A striking instance of gallbladder throwing into confusion the heart and vascular system.

The only instance in my experience of acute indigestion with fatal results rests in an incident of my boyhood when the family cow got to the bran bin over night. She promptly died. Similar accidents after gorging with oats, green corn, white clover, etc., are said to be common with horses and cattle. No parallel casualty seems to occur in human medicine. Hardly a week passes but some man of affairs is reported in the papers as having died from acute indigestion. These deaths are either cardiac, apoplexy, uremic or a ruptured viscus, superinduced no doubt by some heavy repast. Acute indigestion as a cause of death could safely be omitted from medical terminology.

GROUP II.

The second group of cases causing thoracic-abdominal mistakes is the lobar pneumonia-pleurisy group simulating attacks of gallbladder or appendix.

In children, vomiting at the onset of lobar pneumonia is almost the rule. Add to this an oncoming temperature, a pleuritic pain referred to the belly, with abdominal rigidity from the same source and the picture is complete, of a malady resembling appendicitis. In grownups the same resemblance may take place though the mimicry is not so realistic.

CASE REPORTS

Case 7. A man of 40 has been informed after a fluoroscopy that his epigastric uneasiness is of stomach origin. The trouble became greatly aggravated by an attack of grippe, at which time pleuritis was found sufficient to account for his pain. Equally important for diagnostic value was the fact that this pain had no uniform relation to the ingestion of food, a telling feature in stomach disorders.

Case 8. A woman of 45, with failing health, fever, loss of appetite, difficult digestion, and epigastric tenderness had been advised to have her gallbladder drained. Her trouble was tuberculosis in the lower right chest.

Case 9. A woman of 37, for two or three weeks has pain in the liver region and beneath the right shoulder, a slight fever and a dry cough. With a medico-osteopath as her guide she was elected for gallbladder surgery. In her right chest was a classical effusion which yielded on tapping, 1500 cc. of fluid.

In our recent experience with influenza, numerous cases were reported of appendicitis complicating this disease. Our personal impression is that most of these were cases of simulation rather than actuality. For example:

Case 10. At a local hospital I was called to see, in consultation, a young girl who had been taken from a family of influenza cases and hurriedly operated on for appendicitis. The following day when I saw her she was moribund with pneumonia in the lower right lung.

Many instances in the epidemics of influenza were observed where in addition to the classical picture of influenza were added also the symptoms of appendicitis. These may possibly be true cases of an inflamed appendix caused by an epidemic agent. Our opinion is, however, in watching a number of these cases, that they are either pain referred from a lower thoracic irritation or, if they are true appendicitis, they will subside without sup-puration. Assuredly operation on these cases should be deferred.

GROUP III.

A third group of cases at times causing confusion embraces the instances of acute passive congestion of the liver arising from a

sudden onset of cardiac decompensation. Now and then the first brunt of heart failure falls with great emphasis on the liver while the other marks of circulatory stasis are as yet insignificant. Nausea and vomiting are apt to occur. This combined with epigastric pain, liver tenderness and moderate icterus presents a picture quite suggestive of an acute surgical condition of the biliary tract.

I have seen a case with a globular, tense, tender mass in the liver region exhibited as a probable cystic neoplasm of that organ. This proved to be merely a liver swollen from passive congestion.

In my own experience a case to be detailed later, a liver large and tender was attacked in search of abscess. The real trouble was a suppurative pericarditis.

GROUP IV.

The fourth class of cases with which our topic deals includes a few rarer cases of an irregular or bizarre type. The following cases illustrate:

CASE REPORTS

Case 11. A man of 40, in the very presence of a physician is seized with an agonizing epigastric pain. An ashen pallor and cold sweat are upon him. Within twenty minutes thereafter, when I saw this patient, the aspect of shock, the rapid pulse, the leaking skin, the death-like facies, the unrelenting pain, the board-like rigidity of abdominal muscles, even with no history to guide us, warranted the diagnosis of a ruptured viscus. He was ordered to the hospital for immediate laparotomy. Meanwhile another consultant who saw him within an hour discovered an acute pneumothorax on the left. No operation was attempted. The man died in 6 hours. What was the diagnosis? At autopsy was found an esophageal ulcer at the cardiac end of the stomach ruptured into the left chest. The lung of course collapsed, accounting for the pneumothorax and into the chest had been regurgitated all the contents of the stomach.

Case 12. A child of 4 years, following a choleraic attack, continued with a hectic fever, a high polymorph count with sweats and with the general aspect of sepsis. Pus in a surgical quantity was somewhere present. The tenderness, the distention, the immobility on the right located this pus in the thoracohepatic region. Dullness in front extended as high as the third rib. An X-ray corroborated this, besides showing in an upright posture a meniscus of gas, convex above with a horizontal base line, characteristic and pathognomonic of a pyopneumothorax subphrenicus. Misled by a high puncture of the chest which reached this pus, the surgeon chose to attack this as an empyema, disregarding, as we maintained, certain important evidence. A rib resection revealed a clean chest with the pathology wholly beneath the diaphragm. The pneumonia which followed this insult was more than the child could stand.

Case 13. A lad of 17 is seen after ten days of illness. The onset, the clinical history, the physical examination, made a complete story of appendicitis

with an ensuing abscess. A collection of pus could readily be outlined in the right abdomen. Operation, even a simple drainage, which was so clearly indicated, was refused. A few days thereafter large quantities of pus escaped through the bowel. The relief from this was only temporary. Shortly trouble began to develop in the region of the liver and lower right chest. Another ten days of marked illness and distress followed. The disturbance soon found another outlet coming after a fit of coughing in the shape of a volume of fecal pus brought up through the bronchial tubes. This fetid, stercoraceous expectoration continued from day to day, the patient meanwhile rapidly losing flesh and strength. Chills, fever and sweats were present. When I saw him the second time, four weeks after my first visit, his emaciation was that of a rapid phthisis in the last stages. Surgery now indeed seemed rash. Nevertheless a hasty rib resection accomplished perfect drainage of the empyema cavity with immediate cessation of the cough. Weeks of slow recuperation followed. After two months the empyema reformed. About 8 ounces of thick pus were readily liberated through the site of the former rib resection. Six months more of rather poor recovery. Another acute disturbance referred to his appendix. Operation, removal of appendix remains and debris of former suppuration. Recovery prompt with complete restoration to health.

Case 14. A man of about 30 had been ill three weeks with a progressive infection of unknown character and unknown origin. His fever, his high polymorpholeukocytosis, his general aspect, indicated suppuration. The abdomen was under tension while the hepatic region was swollen, resistant and tender. The lungs seemed clear. The heart sounds while weak, were not significant. The diaphragmatic liver region being so prominent in symptomatology, a tentative diagnosis of liver abscess was made. An exploratory laparotomy found an abundance of turbid fluid in the abdomen. The liver was much swollen and dark in color. Free needling of the liver by the surgeon found no pus. A week later an autopsy revealed a suppurative pericarditis, a malady not even suspected by those who saw the patient. The conditions in the liver and abdomen were evidently secondary.

Case 15. A lad of 18 is acutely ill with an abdominal attack marked by great pain and distress in the liver region. Irregular fever, high polymorpholeukocytosis and moderate icterus were present. The progress of the case was fulminating. Pneumonia in the lower right developed on the fourth day. Even so, we again made the tentative diagnosis of liver abscess. Exploration at the hands of competent surgeons found no pus. At autopsy the following day, the liver was found studded with abscesses. From every open vein, it seemed, pus was exuding. The case was one of suppurative pylephlebitis.

From this hurried resume of case outlines is shown the frequent intermingling of thoracic and abdominal symptoms. A week rarely passes in general work without its quota of these borderline cases, some easy, some difficult of analysis. In fairness to his work, he who attacks surgically these dilemmas should ponder, remembering the various factors and possibilities arising from within the thorax.

Rialto Building.

INCIDENTAL FACTORS IN THE DIAGNOSIS AND TREATMENT OF GASTRIC ULCER*

JAMES I. TYREE, M.D.

JOPLIN, MO.

The success attained by the medical treatment of ulcer of the stomach is no longer a disputed fact. The method used in treating a gastric ulcer will not be referred to in this paper more than to state that in general Sippy's routine has been adhered to as closely as possible. All patients are hospitalized for fifteen days. The first five or six days they are kept in bed, after which they are permitted to be up and around the room. All patients are followed up for one and one-half years after leaving the hospital and are given frequent examinations, including stomach tests, during that period.

The probability of a successful outcome depends greatly upon a number of incidental factors which may arise during treatment, or which may be found at the first examination. It is these factors which will be given consideration.

DIAGNOSIS

In making a diagnosis of ulcer of the stomach or duodenum, the history is paramount; after that comes laboratory and physical findings.

A history of periodical attacks of gastric distress influenced by food or soda generally means ulcer. There may or may not be epigastric tenderness, which is best found with the patient standing.

Gastric distress rather than pain should be sought. This distress manifests itself as, pain, burning, belching, vomiting, nausea, excessive flow of saliva, nervousness, headaches, constipation, griping and excessive appetite.

1. Pain, which may be gnawing, dull, or penetrating. There are two general types of pain: digestive, which may be a simple distension due to air swallowing, pylorospasm and over-eating; and hunger pain, which comes in the stomach free from food but with a high acidity. Alkalies relieve this latter type of pain as well as pylorospasm while caution against errors in eating relieves distress due to air swallowing and over-eating.

2. Burning is probably due to a hyperacidity *per se* and to bile regurgitation. It is this latter type of burning that is not relieved immediately by soda. It is to be treated by gastric lavage of plain water repeated frequently, if

necessary, during the first few days of an alkaline treatment. When the acidity has been kept down several days bile regurgitation stops.

3. Belching air, sour fluid, bitter fluid, and food. Air belching ends when the patient is cautioned about air swallowing. Air swallowing takes place as a rule when the patient tries to belch. Pyrosis is stopped by alkalies.

4. Vomiting which may occur immediately after eating or several hours later, and consists of blood, sour fluid, or bitter fluid or blood-tinged fluid. It is not so common with ulcer. Certainly it occurs in cases of organic retention. Frequently we find a patient vomiting bile-tinged fluid before breakfast. Their gastric acidity has become high during the night and nature has attempted to reduce it by regurgitating bile into the stomach. The condition is relieved by using an alkaline powder during the night.

5. Nausea without vomiting is a more common symptom. It is the result of a reverse peristalsis or of bile regurgitation. It may be a baffling symptom unless use is made of the stomach tube, for nausea may mean too high or too low an acidity. I have one case in mind of a young man who was suffering with a duodenal ulcer and a chronic appendix. The appendix was removed and the ulcer treated over a year ago. Several times since then he has come into the office complaining of nausea which has been due in every instance to an acidity that for some reason has climbed up into the nineties.

6. An excessive flow of saliva is sometimes the main symptom the patient complains of. Small doses of atropine control this for the first few days until the patient becomes sufficiently alkalinized, after which it is seldom ever necessary to use the atropine.

7. Nervousness, the result of faulty digestion, sleeplessness and dreaming. As soon as the stomach is emptied promptly these symptoms disappear.

8. Headaches are caused by ileocecal regurgitation, bile absorption from stomach, constipation, or over-alkalinization. Pyramidon is the best drug to be used until the treatment has the patient under control. It may be necessary in some cases where there is derangement of the ileocecal valve or fermentation in the colon, to reduce the carbohydrate intake and use some digestant.

9. Constipation, hard chunky stools, with gas is a common symptom and is relieved without any special effort.

10. Griping (so-called) in intestines is complained of sometimes months before the patients realize they have stomach trouble. It

*Read in the symposium on Acute Diseases of the Upper Abdomen before the 68th Annual Meeting of the Missouri State Medical Association, Kansas City, May 5, 6, 7, 1925.

must be due to a hyperacidity and a rapid emptying stomach.

11. Excessive appetite may also be an early symptom.

CASE RECORDS

Three hundred cases from my records had the various symptoms given with the following frequency. Many had all symptoms, some only one: Nausea, 60; pain, 205; distention, 78; burning, 147; belching, 200; nervousness, 81; excessive flow of saliva, 33; headaches, 64; constipation, 84; tenderness in epigastrium, 108; vomiting, 54; dreaming, 105.

The roentgenologist is able to detect ulcer in from 15 per cent. to 85 per cent. of cases depending upon the individual skill of the roentgenologist. This is not surprising when we recall that an X-ray picture is a picture of a shadow and details contour defects best.

Examination of stools may show occult blood and the urine may be highly acid.

The stomach analysis may or may not be useful in diagnosis. Though a gastric hyperacidity may be due to some cause extrinsic to the stomach a very high acid curve as described later always means ulcer.

Such a curve is to be found by taking the acidity after a fast of several hours and again seventy-five minutes after eating, and the average of the two. The above three hundred cases gave the following averages: Average for 7 hr. fast, T.A. 68 per cent. Average for 75 min. after meal, T.A. 92 per cent. Mean average for two, T.A. 80 per cent.

The lowest average was 45 per cent. and the highest 110 per cent. on any one patient.

This means that the stomach is running an acid curve fifty to sixty points too high at all hours of the day and goes much higher following food.

A markedly positive reaction for occult blood found with repeated analysis in a fasting stomach means an ulcerative process.

EXAMINATION

The stomach analysis itself can be made relatively easy if a few minor points are observed when introducing the tube. The patient should be in a sitting posture, reclining slightly with head straight with body and chin up. The tip of the tube to be used is placed on the back of the tongue and the patient instructed to hold his breath and swallow hard even though he feels like he is choking. If these instructions are followed, the tip passes trachea immediately and there is no further trouble met with. A fairly stiff rubber should be used and it should never be pushed so that it comes in contact with palate. Enough

should be swallowed to allow tube to coil in stomach so that it can be pulled out a bit if a change in the position of the tip is desired. Once the tube is in place it should be held to one side of the tongue. If a fractional analysis is being made, 30 cc. of contents should be withdrawn and reinjected several times at each sample and the patient's abdomen massaged, this thoroughly mixes contents of stomach and does away with the possibility of getting two different types of acidity in the stomach from different places. We run about fifteen stomach tests daily, new cases and old, and it is a rare thing to see a patient gag when swallowing the tube if we use the above care.

There are a number of conditions found in conjunction with ulcer of the stomach which if not remedied have a tendency to prolong a hypersecretion of acid. The most important ones are: Chronic appendix; infection of gallbladder; ileocecal valve disorders; colon disorders; syphilis; pyorrhea alveolaris; abscessed teeth and tonsils.

TREATMENT

The treatment of appendicitis, infection of the gallbladder, syphilis and abscessed teeth and tonsils is the same here as in any other condition.

As to ileocecal valve disorders, I believe that there are two of importance, a spasm and regurgitation. Ileocecal regurgitation has been described well by N. W. Jones.¹ It certainly tends to keep up a hyperacidity and when the ordinary treatment does not relieve the digestive disorders, surgical relief must be sought. Both spasm and regurgitation may be treated medically by heat to point, alkalies by mouth, atropine at times, reducing carbohydrate intake and using a digestant. A carbohydrate digestant lessens the likelihood of undigested carbohydrates entering the cecum and causing fermentation and stasis in the colon with a possible resulting regurgitation into the ileum. When these cases respond to treatment the tenderness leaves and stools become normal.

Colon disorders are due to mucous colitis, kinks and adhesions and faulty carbohydrate digestion; they are treated similarly to ileocecal valve trouble except that olive oil enemas at night may prove advantageous.

Pyorrhea alveolaris demands special attention, it being necessary here to cleanse the teeth before meals rather than afterwards in order to keep accumulated pus from entering the stomach.

In the treatment itself of gastric ulcer, where alkalies are depended upon, the degree of alkalization to be reached is the most important

feature. Too little a reduction of acidity will result in distressing symptoms and a failure to cure. Over-alkalinization will cause headaches, nausea, and at times cystitis so that it is most important to keep our patient's gastric acidity at a proper level.

We endeavor to keep our patient's total acidity around 20 per cent. with an occasional trace of free hydrochloric present. The degree of alkalinization may be checked by symptoms, urine, stools and stomach tests.

The symptoms should not be depended upon too much as they may be misleading. A dry mouth, thirst, headaches and nausea mean over-alkalinization. Excessive gas, slight burning, too frequent bowel function, full feeling, eructating gas and fluid mean under-alkalinization.

The urine becomes very cloudy if the patient is taking too much alkali and the stools too frequent if too much magnesia is being used.

The only actual means of learning the gastric acidity is by use of the stomach tube. Tests should be made daily while the patient is in the hospital and more frequently if necessary. They should be taken at different times during the day and night in order that the acidity at different times of the day may be ascertained. After the patient has left the hospital tests should be made weekly for a while. The advantage of making frequent tests enables you to keep a close check on the patient and reveals what different stomach symptoms may be due to so that after treatment has progressed some weeks, the patient knows more concisely what a certain symptom means.

During treatment there are a number of minor details that may mean much to the welfare of the patient, namely:

Business or household cares or worries. Mueller² is of the opinion that worry may bring about a disturbance of the vasoneurotic system with an attending stasis in mucosa, which he thinks is overly supplied with capillaries in the individual with ulcer tendency.

Faulty occlusion must be remedied as food improperly masticated means delay in the stomach emptying time.

Milk sometimes causes a proteonosis, then carbohydrates must be substituted.

Underweight patients can be brought up to normal by giving milk and cream in sufficient quantities after the meals. Do not give milk before or during a meal as it may retard appetite.

If the urine becomes too cloudy due to an alkali, orange juice added to the diet generally clears it up.

Food preparation is very important in ulcer

treatment. Solid food should be cut finely with the knife and fork so that the patient does not have to chew too long.

These and many other items, such as eating regularly, small meals and more frequent rather than large meals and less frequent, a well balanced diet, rest on the right side after meals and foods not too hot, are amongst the most important things to caution the patient about.

CLASSIFICATION

Patients treated properly for ulcer have been found to fall in one of the four classes:

1. Complete cure of ulcer with complete drop in acid curve.
2. Complete cure of ulcer with drop in acid curve which rises occasionally in after years.
3. Complete cure of ulcer with continued hypersecretion of acid.
4. Failing to cure either ulcer or to control acidity.

The majority of cases fall in class two, while quite a percentage get a complete cure. A very small percentage is found in class three; they are generally individuals who have been heavy eaters of highly seasoned foods and whose stomachs have worked for years to overcome a pylorospasm and finally dilated.

Class four is a very small one but there are certainly a few individuals who for some reason or other fail to respond properly to medical treatment.

1. American Journal of Medical Science, Nov. 1923, c. IXVI, No. 5, Pg. 710.

2. International Medical Digest, May 2, 1924 pg. 572.

Joplin National Bank Building.

DISCUSSION.

DR. T. G. ORR, Kansas City: In connection with gastric and duodenal ulcers, there is a sign that is helpful in making the diagnosis, especially when there is considerable leakage into the abdomen. This sign is pain in the right shoulder region due to the flowing of the contents of the stomach against the diaphragm. It is referred to the point of the shoulder. I am sure if you will remember this, you will find that quite a percentage of perforated ulcers will show this sign. One of my patients complained bitterly of pain in the shoulder region without pain on motion of the arm or joint. When the abdomen was drained, the pain ceased.

Another point to emphasize is that, in spite of our teaching in medical schools, doctors still persist in giving cathartics in acute abdominal conditions. I have opened two abdomens recently with perforated ulcers from which I removed doses of castor oil; one directly due to the doctor's advice; in the other the doctor was a partner in the crime by permitting the patient to take it.

The question of opening the abdomen by mistake for appendicitis is a very pertinent question after the twelve-hour period. In these cases of perforation it is sometimes difficult, especially if the patient's senses are dulled by morphine, to get an early history from him. I had the experience once of opening

the abdomen for appendicitis and finding a perforated duodenal ulcer. That stimulated my interest. I looked up the literature and found Robson reported 56 cases, 19 of which had been opened for acute appendicitis. Needless to say I felt somewhat sustained after reading that report. The offense is not so grave oftentimes. After the contents have spread to the region of the appendix, you should open and drain the lower abdomen. If you open that region and recognize the condition, you have not done harm, because you can drain the pelvis from the McBurney's incision perfectly well.

DR. SAM SNIDER, Kansas City: I was very much impressed with Dr. Chambers' discussion of the relation between pain in the chest from pleurisy and pneumonia, and pain in gallbladder and appendix conditions. Sometimes those two sets of conditions are difficult to differentiate. One may go over the chest in early pneumonia and find nothing at all, and yet two days later the patient may blossom out with a typical pneumonia.

If the doctor will remember that pneumonia, even without pleurisy, causes an expiratory grunt in a large proportion of cases, and that the respiration is usually elevated more than in acute abdominal conditions, he will get a long way towards differentiation of pneumonias from abdominal lesions.

He can go over the chest time and again in early pulmonary conditions and find nothing, and he may cast about to find a method of making a diagnosis early. There may be a consolidation in the center of the lung which he can not percuss, and there may be no rales at the surface. If he will resort to the radiograph he will discover conditions which will surprise him even early in the existence of the condition, and which may avoid opening the abdomen unnecessarily.

I was glad to hear Dr. Chambers refer to tuberculosis of the right lower lung. Most of us are of the opinion that tuberculosis is never found as a primary disease in the lower lung. I have seen five cases in the last three years, proven by finding tubercle bacilli in the sputum. Of course if there is dry pleurisy you will find a friction rub. If you have a central pneumonia, you may find neither; and this is a case where it is important to use the radiograph or the fluoroscope. I have seen a patient with pneumonia of the right lower lung and an accompanying appendicitis. It is easy to understand how one condition may simulate the other, because the nerve supply of the lower chest passes over at the ends of the intercostal space, and the intercostal nerves supply the upper abdominal muscle.

With irritation from pleurisy in the lower portion of the right pleural cavity, it is easy to get a spasm of the muscles of the upper abdomen. Pottenger has emphasized this more than any other in American literature. It is an important thing to remember. In hepatic congestion coming on acutely, it is easy to imagine a lesion in the abdomen and difficult to be sure there is no gallbladder disease. A careful history and a careful physical examination brings out the fact that we are dealing with something cardiac rather than gastro-intestinal.

I was glad to hear the doctor emphasize that point, and I think the points were well taken.

DR. JOHN M. DODSON, Chicago, Ill.: This is not particularly in the field of practice with which I have been engaged, but from the standpoint of the medical educator, I should like to comment on one of these papers. May I say I have seldom heard in any medical organization a better organized, more consistent and practical group of papers than I have listened to this afternoon? But I was particularly

impressed with Dr. Chambers' paper, embodying such a beautiful statement, carefully considered, of observations from his own experience. Of such as this is real medical literature made.

Dr. Vaughan, in an interesting paper a few years ago, called attention to the fact the early medical literature in this country was mostly written by country doctors, embodying observations at the bedside. The early observations on typhoid and the contribution of Marion Sims to the repair of vesicovaginal fistula, which included the discovery of his speculum, are types of this.

We have come to talk about "original investigation" as something of the laboratory and experiments on animals, and of course such work is one kind of research, but it is not the only kind. Laboratory researches have this advantage: They involve controllable factors. They are not as difficult as observations at the bedside, where the factors are numerous and difficult to unravel.

If we are to train medical students to become accurate, thorough observers, they must be taught by the same method as are the so-called research men, or original investigators.

We have erred in the medical schools the last few years by attempting to pile into our students' heads an enormous number of new facts; but for the most part, in the effort to train their faculties so that they shall become keen, accurate, thorough observers, we have been on the right track.

I get a bit tired of hearing that the medical schools are educating their men only for research. Of course they are—the most difficult, thorough, exacting type of research I know of. Dr. Chambers' paper is an excellent illustration of how a man properly trained may be a real research worker at the bedside.

CISTERNA PUNCTURE IN INTRACRANIAL HEMORRHAGE OF THE NEWBORN*

JULES M. BRADY, M.D.

ST. LOUIS

The high incidence of intracranial hemorrhage of the newborn has only in recent times come to be realized. Whether the accident is traumatic in nature or dependent on the hemorrhagic disease is *sub judice*. A conservative view would be that the effect of trauma is aggravated by the hemorrhagic tendency which exists in such a large percentage of these newborn babies.

This accident in the newly born is frequently overlooked, the cause of death being given as asphyxia, convulsions, atelectasis, or what not.

Since the profession is coming to realize that if anything unusual occurs to the baby the first 10 to 14 days, intracranial hemorrhage must be thought of, more and more cases are being recognized. If the obstetrician notices that it is with difficulty the baby is made to breathe immediately after delivery, or will not nurse,

*Read before the American College of Physicians at St. Louis, March, 1924.

is dopey and never brightens up, or if the baby is unusually restless and not only cries but screams, if there is puffiness about the eyes, if there are attacks of cyanosis and difficulty in swallowing, if the sutures are separated and the fontanelle bulging, and, finally, if convulsions occur, his first thought must be of the possibility of an intracranial hemorrhage. It is the quiet baby, difficult to arouse and unwilling to nurse, but whose symptoms never become stormy and who improves greatly at about the 10th or 14th day, that we are especially likely to overlook. The infant seems to do fairly well, the symptoms do not grow worse and each day we expect the condition to improve, and it does. To perform any operative procedure we might be accused of being meddlesome, and just this kind of case the writer has seen develop the typical spastic cerebral palsy toward the end of the first year.

The idea of the operative removal of the clot was conceived by Cushing twenty years ago. Accounts of the success in the literature of this procedure are few and far between. Any one who has opened the skull in these cases post mortem would readily see the difficulty of accomplishing anything by this operation. On the other hand a number of infants with intracranial hemorrhage presenting ominous symptoms have been completely restored by the simple operation of lumbar puncture. I have met with 22 cases of intracranial hemorrhage and 9 cases made a complete recovery following this simple procedure.

Following lumbar puncture the favorable results are usually seen immediately; the thought that reduction of intracranial pressure must play a large role in the favorable results would seem apparent.

However, lumbar puncture sometimes disappoints us as our efforts are rewarded only with a dry tap. The reason for this is not always apparent, but there seems to be a block in the subarachnoid space. Adhesions from a meningitis cannot be assumed—failure to obtain fluid robs the baby of a chance for its life.

REPORT OF CASES

Case 1. Baby F., born March 3, 1923, at St. Ann's Hospital, St. Louis. The baby was seen the second day of life in severe convulsions which resisted all medical measures. The sutures were separated, fontanelle full but not bulging, and the whole head had a peculiar globular shape which the obstetrician had noticed at birth. The diagnosis of an intracranial hemorrhage seemed certain. Lumbar puncture was attempted three different times with no return of fluid. Puncture of the cisterna magna was then decided on. This was successful and a large stream of blood flowed from the needle. After the withdrawal of 30 cc. the flow was interfered with and the needle was withdrawn. The fontanelle was less full and the sutures were not

so separated. The possibility of a suboccipital vein which courses the circumference of the foramen magnum having been wounded would be contradicted by the symptoms of marked relief in the intracranial pressure.

Six hours later the infant died. Autopsy revealed an extensive hemorrhage with clots over the right hemisphere; below the tentorium was a collection of dark red liquid blood.

The post mortem findings made it clear that this was a hopeless case no matter what method of treatment had been resorted to. The hemorrhage, a very extensive one, being supra and infratentorial, was incompatible with life.

Puncture of the cisterna made it possible to make a positive diagnosis *intravivam* and also gave the baby a chance for its life.

Case 2. Baby B. was seen at 13 days of age. Twenty-four hours after birth, which was very difficult, convulsions appeared. The baby had great difficulty in swallowing and breathing. Chloral had been given by rectum and the baby fed with a spoon and dropper. Examination revealed a rather lifeless infant with an icteric appearance of the skin which was very striking, respiration was accompanied by a rattling noise in the throat, apparently due to an accumulation of mucus. Swallowing was barely possible. The anterior fontanelle was flush but not bulging. There was a distinct separation of the margins of the sagittal suture. All who saw the infant considered it moribund; death seemed a matter of but a few hours. Lumbar puncture was performed twice; the first attempt a dry tap, the second yielding one cc. of blood. Puncture of the cisterna was easy and yielded a large stream of black looking blood; 20 cc. were withdrawn. This blood promptly clotted in the receptacle. The condition of the baby improved; the baby swallowed better and there was less separation of the sutures. One week later vomiting appeared which was interpreted as gastric in origin. The general symptoms were all very much improved. The infant is now over six months of age and gives every indication of making a complete recovery.

Quincke, who in 1890 gave to the world the lumbar route to the subarachnoid space, early suggested that fluid could be obtained from the cisternae by suitable punctures but considered them too dangerous for every day use.

Cushing and Haynes had incised the occipito-atlantoid ligament thus draining the cerebello-medullary cistern and their method was adopted by the early experimentalists.

PUNCTURE OF CISTERNA MAGNA

It was James P. Ayer, Boston, who popularized this operation in clinical medicine; he undoubtedly considers it potentially a dangerous procedure. He recently has reported 1985 punctures performed by fifty different men without a death which could be attributed to this operation.

In tapping the cisterna, with the thumb one locates the spine of the axis, the needle then is directed upward and slightly forward in the direction of the glabella and external auditory meatus. The depth to which one must

pass the needle before puncture of the occipito-atlantoid ligament is affected, is best guided by the tactile impression. The interruption in bony continuity between the base of the skull and spine affords a rather large opening for the passage of the needle.

In the adult there is a distance of from 2.5 to 3 cms. between dura and medulla as shown by Ayer in frozen sections, the distance depending on the obliquity at which the needle is introduced.

The question naturally arises as to the danger of damaging the medulla in the young infant. Even in such small laboratory animals as the rabbit, guinea pig and rat, there is sufficient space in the cisterna so that there is no necessity of damaging nerve structures.

There are some who question whether the blood which flows from the needle really comes from the subarachnoid, believing a wound of a small vein to be responsible for the presence of the blood. When one sees such a sudden and marked relief from all the symptoms with a prompt subsidence of a bulging fontanelle there can be no question about a relief of the intracranial pressure. In some punctures there are just a few drops of blood which trickle from the needle; this result should always be questioned. But when you see a veritable stream of dark liquid blood pouring out of the needle not much doubt can remain in one's mind.

That lumbar puncture at times fails us is shown by Wm. Sharpe who, in 100 consecutive punctures on newborns, got a dry tap in 8 per cent. of the cases.

The following case occurred in my practice three years ago:

Case 3. Baby B., birth normal, was doxy and refused to nurse; sustained by tube feedings, no convulsions, no separation of sutures, but a pronounced jaundice. An intracranial hemorrhage was suspected and lumbar puncture performed three times with no results. Diagnosis left in doubt. Infant under observation until 13 months of age, a typical case of Little's disease having developed. A cisterna puncture in this case might have given valuable information.

Ayer recommends cisterna puncture in three groups of conditions:

1. In spinal subarachnoid block following meningitis.
2. Combined with lumbar puncture for irrigation of the subarachnoid space.
3. As a route for serum injection in epidemic meningitis.

I have not seen mention in the literature of puncture of the cisterna cerebello-medularis either for the diagnosis or treatment of intracranial hemorrhage. It is the belief of the writer that cisterna puncture is a valuable

procedure in the diagnosis and treatment of intracranial hemorrhage in the newborn. Lumbar puncture should first be performed and if it is not possible to remove sufficient fluid to cause a marked reduction in intracranial pressure, cisterna puncture should be resorted to.

Owing to the proximity of the medulla, the entrance to this cavity must be considered a serious procedure. Sufficient clinical material is at hand to make it seen that with care there is no reason to withhold from our patients the benefits from this procedure.

Approach to the subarachnoid space through the occipitoatlantoid ligament brings us in immediate contact with a large amount of cerebrospinal fluid. Whether it is possible to have an intracranial hemorrhage of any extent and not have a bloody spinal fluid is very doubtful. We now, then, are in a position to settle rather definitely if there is any bleeding in the skull. In case of doubt, by all means the cerebrospinal fluid should be inspected.

Lumbar puncture, owing to its simplicity, would be the procedure of choice but in no instance does the writer believe that, in the light of present experience, we would be justified in refusing to resort to cisterna puncture immediately where our results from the former operation are equivocal.

1467 Union Ave.

THE TECHNIQUE OF ABDOMINAL SECTION FOR APPENDICITIS WHICH HAS ABSCESED*

W. F. GRINSTEAD, M.D.

CAIRO, ILL.

So thoroughly and repeatedly has the subject of appendicitis been thrashed out since Reginald Fitz discovered it and named it in 1886, that it is now considered trite and stale.

Some medicos have a feeling that about all is known upon the subject that can be known. These self-satisfied scientists must revise their conclusions. There are doctors here today who formerly treated this disease for typhlitis, perityphlitis and peritonitis and read pages and pages in their standard authorities on these subjects to be sure that their patients had the latest and most approved treatment. These authorities discussed, in detail, an ensemble of symptomatology without knowing what they were talking about.

Many a time I have expatiated learnedly upon these mythical subjects in an effort to explain to my patients what was wrong with

Read before the Forty-Ninth Annual Meeting of the Southeast Missouri Medical Society, Malden, Mo., May 13, 1925.

their "in'ards" and how to cure it by turpentine stupes, hot fomentations and keeping bowels open. Even now an occasional patient is admitted to my clinic with blistered bellies from tr. iodine and hot applications.

The overwhelming majority of medical men are now agreed that medical treatment for appendicitis is palliative only. It is admitted that the majority of first attacks seemingly recover. In some patients several recurrent attacks recover and occasionally we meet a credulous physician who believes that medical treatment is curative. That reminds me of a statement I heard William J. Mayo make several years ago in his great clinic. He was operating for a chronic gastric ulcer by gastroenterostomy. He said it was unfortunate for that class of patients and for the clinic that they did not come earlier for operation. "They have had nine permanent cures by medical treatment before we get them."

Now they are curing, by surgical treatment, 85 per cent. of gastric ulcers and 94 per cent. of duodenal ulcers. With much truth Mayo's epic might be paralleled with the medical treatment of appendicitis. Aspad G. Gerster, of New York, in his excellent little volume in surgery, reported one case which finally came to operation which had suffered 16 recurrent attacks of appendicitis. These facts explain why so many cases of appendical abscess come to our hospitals.

Another cause of these late cases is a wishy-washy, namby-pamby diagnosis. The physician hesitates to take a positive stand when his judgment tells him it is a 100 to 1 shot that nothing else could produce the history and clinical signs that the patient presents. He knows that his patient is haunted by dread and fear of the operating table and he doesn't like to tell him something that he doesn't want to hear. If, on the contrary, the physician would take a positive stand, in accordance with his judgment, and say to his patient that there was no doubt in his mind about the diagnosis and assure him of the very small risk of early operation, of the practical certainty of a recurrence of the disease, of the danger to life if the disease is permitted to run its course without surgical treatment and the course he would pursue if he or a member of his own family were the victims of this infection, there would be a great reduction in pain, chronic invalidism, physical disability and death.

The mortality following appendectomy in the first day or two of an acute attack is negligible. It might be said to be accidental. The same statement applies to the interval operation. The reasons why these early or interval operations are not more generally practiced

are mainly two; first, a hesitating, qualified diagnosis; and, second, the refusal of the patient to accept his physician's advice. The fact remains that many abscess cases are admitted to our hospitals and the purpose of this paper is to consider the safest and most satisfactory procedures for their relief.

To begin this consideration, where and how shall we make our incision? We have the standard incisions of McBurney, Treves and Deaver. I will not take your time to describe them. Suffice it to say that they may all be disregarded in the cases that have abscessed. Mother Nature has constructed a wall of defense against the enemy. This must not be disregarded. Under surgical anesthesia this wall can be definitely outlined and the incision should be directed straight into the center of it. It should not be a bold plunge but a painstaking dissection, layer by layer. Otherwise there is danger of wounding or perforating the bowel. The incision should be a short one. Why? Because, no matter how carefully you may close it, the suture line is almost certain to become infected, pull open, and, finally, heal by granulation, a long drawn out procedure which leaves a weak point in the belly wall. The longer the scar the longer the healing and the weaker the belly wall and greater the probability of ventral hernia. Moreover, the long incision is more likely to invade the abscess wall that protects the peritoneal cavity and establish a communication between the two cavities with all the danger that means.

When the abscess is opened and swabbed out the finger should be gently introduced and the cavity explored in search for the appendix and fecal concretions. We must not permit ourselves to become obsessed with the idea that we must remove the appendix and show it to the family. Of course this would be an impressive, "grand stand" demonstration; but it is apt to be one of these "successful, complete operations, but the patient died."

If the appendix can be readily identified, remove it; otherwise leave it. A few times in my earlier experience I broke extensive adhesions to remove the decaying appendix. I was so sorry and melancholy over these complete operations that my hardihood promptly vanished. The best of all rules in surgery is the old railroad rule, "Safety First." Experience has proven that the conservative treatment of the abscessed appendix is seldom followed by recurrence of symptoms. The suppurative process so completely disintegrates the appendix that practically nothing is left to feed further infection. In the hundreds of such cases I have treated I cannot recall more than half a dozen that have returned for further treat-

ment. When they have returned, nature has pushed the remnant up near the surface where it could be easily and safely removed. This conservative plan shows a very low mortality.

But, every appendical abscess is not susceptible to this plan as a routine practice. There is a class of cases, too often encountered, in which we find ourselves in the general peritoneal cavity before we reach the abscess cavity. This situation renders a communication between the two cavities inevitable. What are we going to do about it? We will locate the appendix and remove it. If we do not the suppurative process will continue for a time and there will be no way to prevent leakage into the peritoneal cavity with its danger of diffuse, septic peritonitis. At this juncture a problem of much importance is presented. At the meeting of the American Medical Association in 1911, at Los Angeles, California, I heard a paper read in the Section on Surgery, by Dr. Van Buren Knott, of Sioux City, Iowa, that made me "sit up and take notice." It appeared radical and hazardous. My first impulse was that it would open a new avenue for the spread of septic infection. I was impatient for the discussion that was certain to follow by experienced and conservative surgeons. They let him down easier than I expected. I brought the lesson home with me and pondered over it. My own experience had developed the observation that, in many of these abscess cases, infectious serum and sometimes encysted pus, had accumulated in the rectovesical fold in males and in Douglas' pouch in females and they had to be swabbed out and drained. The burden of Dr. Knott's paper was that the appendix should be identified and removed in all abscess cases. That nature's wall of defense should be disregarded in this "search and seizure" method and that a drain should be placed in the rectovesical fold or Douglas' pouch in every case. He reported 283 cases in his practice with only three deaths under this technique. In the "final analysis" my own conclusion was that Dr. Knott's method combined both truth and error. In the class of cases pointed out above, in which the peritoneal cavity is opened before the abscess is reached, and there are many of them, the appendix should be removed and the drain placed in the bottom of the peritoneal cavity and the patient placed in the Fowler position. Infective exudates inevitably gravitate to the rectovesical fold or Douglas' pouch and cannot escape the drain. Here is the truth, and the saving clause, in Dr. Knott's method. On the other hand, when the abscess can be drained without opening the general peritoneal cavity, which is clearly nature's

plan, the surgeon co-operates with nature and rarely loses a patient. To ignore nature, demolish her defense and rely on pelvic drainage is like striking a match to see if you have gasoline in your car. Here is the error in Dr. Knott's teaching. After removing the appendix, it has been my practice for several years to swab out the abscess cavity with 3½ per cent. tr. iodine for disinfection before placing my drain. A mighty howl has gone up from certain quarters against this practice. It has been argued that the iodine will create dense and dangerous adhesions. This argument is not supported by the facts of experience. The dilute tr. of iodine appears to enfeeble or subdue the rank infection which causes the troublesome adhesions and thereby attenuates rather than strengthens them.

CONCLUSIONS

1. We should make short incisions in pus cases.
2. We should respect Nature's wall of defense.
3. We should disinfect the enemy's camp.
4. In cases in which communication between the general peritoneal and abscess cavities have been inevitable, the drain must extend into the bottom of the pelvic cavity and the patient placed in the Fowler position.
5. We should remove the drain not later than the fifth day to minimize ventral hernia and fecal fistula.

THERAPEUTIC RESULTS WITH CONCENTRATED SCARLET FEVER ANTITOXIN

The results in the antitoxin series and in the control series, reported on by GEORGE F. DICK and GLADYS HENRY DICK, Chicago, (*Journal A. M. A.*, March 14, 1925), indicate that concentrated scarlet fever antitoxin, injected intramuscularly, blanches the rash, lowers the temperature, and improves the general condition of many scarlet fever patients. If the antitoxin is given early in scarlet fever, the course of the disease is shortened and the incidence of complications and sequelae is greatly diminished. One therapeutic dose, as described above, suffices in early cases of moderate severity. The concentration of the antitoxin serum and its exact standardization makes its use as a routine measure in the treatment of scarlet fever practical.

ROSEOLA OF THE CONJUNCTIVA

A subacute exanthematous conjunctivitis, peculiar to secondary syphilis occurred in three cases reported by Samuel Morse, New York (*Journal A. M. A.*, April 25, 1925). These patients never knew or were informed of a syphilitic infection, and had no other evidences of it. The history given was that the inflamed eyes would not improve under the ordinary treatment for conjunctivitis, as known.

THE JOURNAL

OF THE

Missouri State Medical Association

SEPTEMBER, 1925

EDITORIALS

THE PITIABLE PLIGHT OF GOVERNOR BAKER

Governor Baker finds himself in a pitiable plight due solely to his lack of ability to grapple a serious problem with boldness and decision. His fatuous excuses for not attacking the deplorable conditions disclosed in the Enloe-Horton-Board of Health scandal will not serve to lift the responsibility from his own to other shoulders.

Thrice during the past four years the mantle of shame has been thrown over the fair name of Missouri. In 1921 we became disreputable in the eyes of the entire country when the word "reputable" was removed from the medical law. Happily that stigma was wiped out in March, 1923; the second disgrace, a logical outcome of the first, fell upon us in October, 1923, when the medical diploma mill ring was exposed. Now, today, for the third time, Missouri must bow in humiliation and disgrace while the entire country points the finger of scorn and cries "shame," because of derelictions of the secretary of the State Board of Health.

The State Board of Health is the most important appointive body functioning in behalf of the people. It deals with the problems of health and sanitation, subjects that are more or less of a mystery to the vast majority of the people. Every member of that board must be a person whose integrity is above suspicion, whose reputability is unassailable, whose knowledge of disease and its control is beyond dispute. Less than this opens the door for quacks and frauds to obtain state licenses to prey upon the most helpless class of citizens, the sick, the injured and the mentally subnormal.

Dr. Enloe has been a member of the Board of Health since April, 1921, and its secretary from that time until February, 1925. The trail he has left behind him is a nauseating one.

Finding the personnel in the Board of Health office, including the registrars, fairly free from political influence when he took charge in

1921, Dr. Enloe immediately injected politics into the management of the office and the appointment of registrars. So obnoxious was this activity on his part that protests began to pour into the office of our Association until upon our complaint the Board took cognizance of the situation and somewhat curtailed this pernicious activity. His whole régime as secretary of the Board of Health was a disappointment and source of great distress to the medical profession and to others interested in the maintenance of the high standards of medical practice and the administration of health laws. When he resigned as secretary of the Board of Health it was presumed that he also resigned as a member of the Board and was out entirely. A sense of great relief permeated the entire medical profession of the state and others whose interest in reputable medicine and the welfare of the people brought them in contact with the work of the Board of Health. Indignation, chagrin and dejection among us followed the announcement that Governor Baker had reappointed Dr. Enloe a member of the Board of Health. We thought, however, that with the accession to the secretary's office of Dr. James Stewart, the sinister influence of Dr. Enloe in the work of the Board of Health might be negligible. Thus we rested and hoped that Missouri would finally emerge purged and purified when the State Board of Health completed its trials of those who had been charged with obtaining licenses through fraud and deceit.

But our hopes were shattered when on August 1 the newspapers published a story that Dr. R. B. Horton, of Purdy, had solicited and accepted money from graduates of non-reputable medical schools who had insufficient preliminary education, to obtain admittance of these persons to the examinations for license. According to this story Horton claimed that he had wide political influence in Jefferson City and that his influence in the Board of Health was obtained through his friendship and political affiliation with the then secretary of the Board, Dr. Enloe. The charge was made that documentary evidence was available to prove that Horton received money from these unqualified candidates and that the amounts involved would run into figures approximating \$30,000. Photographic copies of checks and letters seemed to confirm that accusation.

Our members are all familiar with the nauseating details of this story and with the fact that Dr. Emmett P. North, President of the State Board of Health, and Dr. James Stewart, Secretary of the Board, hastened to Jefferson City for a conference with Governor Baker

and after laying the matter before him told the Governor that they could not serve on the Board if Dr. Enloe were permitted to remain a member. Encouraged by the Governor's reception into the belief that he would take immediate steps to correct this sad state of affairs, Drs. North and Stewart returned to their homes and awaited developments. The subsequent declaration by Governor Baker that he would not ask for Dr. Enloe's resignation and would not accept it if tendered; that the conditions complained of did not occur during his administration and therefore he refused to be excited about them; that he had not read Dr. Waite's report severely criticising Dr. Enloe's administration, loosed a flood of furious criticism upon Governor Baker for such unexampled inertia in the face of so serious a problem.

Throughout the entire controversy Dr. Enloe refused to make a statement but continually declared that "the records of the Board speak for themselves."

The report of Dr. Frederick C. Waite, of the Western Reserve Medical School, who had assisted the Board of Health in the inspection of medical schools in Missouri and the condition of the records in the office of the State Board of Health, was handed to the Board and to Governor Baker in the midst of this dreadful situation. If there were any doubts in the minds of persons familiar with the administration of the health department concerning the efficiency of Dr. Enloe as secretary of the State Board of Health, Dr. Waite's report shattered them. If Dr. Enloe is satisfied to let the records of the Board speak for themselves he is satisfied to accept the severest condemnation that an official document can express, namely, indifference and contempt of laws, rules and procedures to protect the health of the people. We quote some of the criticisms reported by Dr. Waite:

Only in remotely incidental cases was any effort made to verify directly the statements made by the applicant on the blank form furnished by the Board. This was clearly a duty of the secretary's office.

In many cases the applicant failed to answer all the questions on the blank, some of which were essential information as to education. In one case of a man who was licensed after special examination, and since revoked, no information is given on the application, simply his name is signed.

In another case the applicant states he attended a certain high school, giving no dates. The certificate to substantiate the preliminary education of that applicant simply states what is the course of study in that high school at a date much subsequent to the time when the applicant could have been there as a student. It makes no mention of the applicant, and yet this was ac-

cepted as showing graduation by this applicant from a four-year high school.

In another case it is definitely stated the applicant graduated from a two-year high school but this was accepted as sufficient.

Some applications of men licensed in recent years which I wished to study were not in their proper place in the files nor could employees of the Board find them.

Another reprehensible practice that the records show is that over a period of quite a number of years there have been numerous instances of disregard of the provision of the statute and applicants who had not filed their application thirty days before the examination, or whose application was incomplete, have been admitted to the examination. This has even extended to admitting applicants who filed their applications on the first day of the examinations, and in some cases the dates show the application was not filed until after the examinations were over. In all these admittances it appears that the former secretary participated, and in many was initially solely responsible.

Obviously there was no opportunity to investigate the authenticity of the facts stated in an application filed at the last moment, so it was the custom to require waivers in such cases in which the applicant, over his signature, waived any right in the examination until his application was completed and accepted. I have found no record of any of these waivers being enforced, and the examination declared invalid.

When, in January, 1924, Dr. Hopkins was put in charge of licensure procedures, it was agreed that all applications were to pass through his hands and be investigated by him.

These two agreements were clearly violated in the admissions to the examinations of June, 1924. Shortly after the examination President North requested me by wire to come to Jefferson City to inspect the applications of all candidates who had been admitted to the recent examination. I found that seventeen graduates of schools known to be unable to give adequate training had been admitted. These seventeen men, as usual in the examinations, had been assigned numbers by the Secretary. Their identity or presence was therefore not evident. Five of these were entitled to enter under agreement for re-examination, but of the remaining twelve, six were from a single notorious Chicago school and six more from similar schools in other states, some of them being from the non-reputable Missouri schools. The applications of these twelve were not turned over to Dr. Hopkins for investigation; indeed some of these applications first appeared on the day examinations began. These applicants were admitted by a clerk from the secretary's office and she said it was done at the direction of the Secretary of the Board.

The study of applications, their acceptance, and the procedure of admission to examinations shows a failure to appreciate the purpose of the application, indifference as to its completeness and authenticity and extreme carelessness in the administration of the procedure of admission to examinations. The major responsibility for this must rest with the Secretary of the Board in whose hands and office was done all the detail of acceptance of these applications.

Laxity in interpretation, verification and enforcement of preliminary education is at the bottom of most of the difficulty in medical licensure

in Missouri in the past decade, and for that condition the office of the Secretary of the Board is chiefly responsible.

Dr. Enloe did not sit with the Board in any one of the trials for revocation of licenses.

Dr. Enloe did not accompany the Board in any of the inspections of medical schools.

Dr. Waite's complete report appears at p. 371.

PHYSICAL EXAMINATION IN THE DIAGNOSIS OF TUBERCULOSIS

The examination of the lungs for the detection of a tuberculous process requires the most exacting attention on the part of the examiner; to that end all extraneous factors must be eliminated. The patient should be stripped to the waist, the room should be between 70 degrees and 75 degrees F. If lower, it causes fibrillary twitching in the muscles of the chest; if higher, it may prove uncomfortable for the doctor. The patient should be seated on a revolving stool, with hands placed over the lap and his position should be easy, natural and comfortable, not taut, strained or on edge.

Many examiners prefer to examine the posterior chest first, since here the major portion of the lung is projected on the surface, and the annoyance of coughing in one's face or other distracting factors is at once avoided. With the patient and the doctor comfortably set, we inspect the chest and note any changes in its symmetry; whether there are retractions in the supraspinous fossa of one side or the other, whether the expansile movement of the thorax is equal, or whether there is lagging. These findings are supplemented by palpation, as a result of which we learn the condition of the muscles and overlying tissues; whether there is atrophy of local groups of muscles or whether there is spasm, or both atrophy and spasm. The palpatory determination of alteration in expansile movement of the chest is of great importance.

In percussing a chest it is well to establish the normal for each particular individual, and this is best done by light percussion over the lower chest and using the quality of note heard as a standard, with proper allowance for such modification as the topography of the chest warrants. With a patient's normal note firmly established, it is relatively easy to determine even slight changes. Often a chest must be percussed in its entirety a dozen or more times before the examiner can feel reasonably certain that a particular area presents an impaired note.

In auscultation we again try to establish the normal quality of each patient's breath sounds during quiet easy breathing, and then note any changes from this normal. Harshened or roughened or granular types may prove the very first and only evidence of a localized

tuberculous infiltration. The harsh bronchovesicular or bronchial types in which expiration is lengthened may signify an old fibrotic process which has burnt itself out, and needs only cautious advice and no treatment.

Of great importance are the changes in the whisper sounds. Indeed it is often the only definite evidence on which a diagnosis of early tuberculosis can be made. Listen with the naked ear away from the chest before listening for changes in the whisper sounds with the stethoscope. Be sure that your patient is repeating the words or numbers with the exact force desired.

The most important findings in an examination of the chest from the standpoint of a tuberculous involvement of the lung is the rale. Bushnell defines the rale as the sound produced by the passage of air through tubes in the presence of moisture. According to this definition there is no such thing as a dry rale, and every rale represents moisture in the area over which it is heard and means infiltration or exudation or both. The size of the rale depends on the size of the air passage and the amount of moisture present during the passage of air through it. If a rale has a squeaky sound the air passage is extremely small and the moisture minimal. If the rale has a bubbling character the air passage is fairly large and the moisture plentiful.

The rales of early tuberculosis are seldom heard during quiet, easy breathing, frequently not after increased or forced breathing and often not after coughing, unless the cough occurs just at the end of expiration followed immediately by an inspiration during the early phase of which the typical rale of tuberculosis usually occurs. Such rales occur in showers, are constant, and most often have a crackling sound. One must be sure that there is nothing in the upper respiratory tract from which sounds simulating rales are frequently transmitted through the chest to the stethoscope. Rales in common with all abnormal physical findings are practically always found in the upper chest, in the supraspinous fossae and interscapular spaces to the level of the fourth or fifth dorsal vertebra, and above and below the clavicles to the second intercostal space. It is a good rule to suspect tuberculosis in every abnormal condition in the upper chest and to hold abnormal findings in the lower chest as not tuberculous until definitely proved. The physical examination of the anterior chest is carried on in the same way as that described above for the posterior chest.

It is well to bear in mind that repeated physical examinations are often necessary to make a positive diagnosis.

OPTOMETRIST SUES O. H. GERRY OPTICAL COMPANY

Every member of our Association will be interested in the outcome of a suit brought by an optometrist against the O. H. Gerry Optical Company, of Kansas City, alleging libel because the company advised persons to have an oculist examine their eyes whenever eye trouble developed.

The O. H. Gerry Optical Company, of Kansas City, being in the business of supplying lenses and frames for eye glasses, decided to limit their sales to those who brought prescriptions from oculists only. This decision led the company to inaugurate a campaign of education through advertisements in the newspapers, advising people to consult an oculist for eye trouble, explaining that an oculist is a physician who has graduated in medicine and that the prefixes "Dr." and "Doctor" do not always mean a Doctor of Medicine. One of the advertisements published in the *Joplin Missouri Globe* reads:

HAVE YOU GOOD EYES?

The eye specialist who is also a fully trained physician M.D. is termed an OCULIST

No other similar word means all of that—the combination of every professional qualification for the care of the human eye, with at least five to seven years of college education in medicine.

This is important when it is considered how many disorders of the eye have their origin elsewhere in the body. Many things other than lenses may be required for treatment of the eyes.

When conditions do indicate the need for eye-glasses, medical factors are involved whose meanings only the trained physician can know.

Many persons have tardily discovered this because the Oculist, earnestly at work, and bound by lofty professional ethics, does not thrust himself forward.

But we, who have served Oculists for years, know their supreme importance. So strongly do we feel that the health of the nation's eyes can be entrusted only to this Physician-Specialist, the Oculist, that we restrict to Oculists exclusively, all distribution of our products.

It is a business policy, but founded on reasons which may well guide you when your eyes require professional attention.

Be sure that the one who examines your eyes for glasses is an Oculist, M.D. The prefix "Doctor" or "Dr." does not always mean a "Doctor of Medicine," but the letters "M.D." after a name signifies "Doctor of Medicine." For "THE SAFE WAY" consult an Oculist.

O. H. GERRY OPTICAL CO.
KANSAS CITY, MO.

An educational campaign in the interests of better vision being conducted by the O. H. Gerry Optical Co. as a public service.

The optometrist who has brought the suit is G. E. Ward, who lives in Joplin. Mr. Ward feels so aggrieved and abused by the publication of this advertisement that he asks the court to penalize the O. H. Gerry Optical Com-

pany and the *Joplin Globe* in the sum of \$20,000, to be transferred to his pockets. He avers in his petition that he is "in the profession and business of optometrist and optician," has been so engaged for many years and that the advertisement complained of was circulated in the territory where he does business, and he asserts that the statements are "false, fraudulent, defamatory, malicious and libelous," tending to deprive him of his income and of the confidence of those with whom he does business or might in the future establish professional and business connections.

"If the Missouri courts," says an editorial comment on this case in the *Journal of the American Medical Association*, "should hold that an advertisement is libelous, because it proclaims the advantage of services or merchandise offered by one group and, by bringing business to that group, lessens the business of another or others, advertising will probably become a lost art, at least in Missouri. The very purpose of most advertising is to accomplish such ends. Meanwhile physicians may rightly express their appreciation of the truth contained in the announcement by the defendant in this case."

The O. H. Gerry Optical Company have been conducting this campaign in the interests of better vision for quite a while. At present they have a series of six advertisements appearing in the newspapers of Missouri, Kansas and Oklahoma, and in addition they are preparing a booklet for distribution entitled "Your Eye and Your Oculist."

Physicians everywhere will appreciate the service rendered by the O. H. Gerry Optical Company, and the people who heed their advice will be benefited. Many physicians in all parts of the country have written to the Gerry Company expressing their acknowledgment of the service, and their good will for the campaign. If the case against the Gerry Company and the *Joplin Globe* should come to trial it will furnish an unexampled opportunity for demonstrating the difference between optometrists and oculists.

CATHOLIC HOSPITAL CONVENTION

Thirty-one delegates from St. Louis will represent the various Catholic hospitals of St. Louis at the annual Catholic Hospital Convention to be held in Kansas City, Mo., September 1, 2, 3.

This convention will include delegates from all Catholic hospitals of Missouri and Kansas as well as visiting nurses and Sisters of neighboring states. The purpose of the three day session is to plan for greater efficiency

and cooperation in medical service and to discuss the past year's experience in establishing and organizing of hospitals, clinics and charitable work.

One phase of the discussion will probably be the cooperation of hospitals with educational institutions. In this respect the St. Louis hospitals have been eminently successful in their affiliation with the Medical School of St. Louis University. Not only has the affiliation resulted in the securing of some of the best medical services possible but it has provided probably the best clinical facilities available to any university in the United States.

September 3 will be devoted exclusively to papers and lectures prepared by the St. Louis delegates. Sister Mary Constance, of St. Anthony's Hospital, St. Louis, will preside. Sister Irene, Procurator General of the St. Mary's Hospital, has announced the following tentative program for that day: "The Sister Nurse and Her Religious Superiors," by Sister Mary Bernadette, of St. Anthony's Hospital. "The Catholic Hospital and the Non-Catholic Patient," by Sister M. de Chantal, of St. Mary's Infirmary. "The Hospital Sister and the Lay Nurse," by Sister M. De Lellis, of St. John's Hospital, Springfield, Mo. "The Nun and the Hospital Staff," by Rev. Mother M. Concordia, of St. Mary's Infirmary. "Assisting at Death Beds," by Sister Constance, of St. Anthony's Hospital.

NEWS NOTES

Dr. Delon A. Williams, Kansas City, sailed from New York August 22, for Europe, where he will spend a year in the universities of Vienna.

Dr. Deborah Doan, Trenton, a member of Grundy County Medical Society, was married August 8, 1925, to Mr. Earl Phillips, Trenton. She will continue to practice at Trenton.

Under a new ruling of the board of education of Kansas City all children preparing to enter the kindergarten must register their birth certificates at the office of the board of health.

The Melton Laboratories, Kansas City, were recently charged with advertising a fake vitality restorer for old men. Circulars sent through the mail claimed the medicine contained a newly discovered German "vitality" drug but the postoffice inspector claimed the medicine was useless. Use of the United

States mails was denied the company but no criminal charges have been preferred against its manager, Harold M. Stunz.

Dr. William H. Thaler, St. Louis, Captain in the Missouri National Guard, Medical Detachment 138th Infantry, was on duty during the encampment of the National Guard at Nevada, Missouri, in August.

Dr. Lex G. McCutchen, St. Louis, has become associated with the St. Louis X-Ray Laboratory as medical roentgenologist. Dr. McCutchen was formerly associated with the X-Ray and Radium Department of the City Hospital.

The next examination of applicants for licenses to practice medicine will be held in the Muehlebach Hotel, at Kansas City, October 27-30, by the State Board of Health. All applicants must file their applications thirty days prior to the date of examination.

Dr. Samuel R. Stofer, Hollywood, Calif., died August 17, after a prolonged illness. Dr. Stofer was the father of Drs. E. S. and Dar D. Stofer, of Kansas City, and had practiced in that city for over a quarter of a century. He went to Hollywood about six years ago.

Drs. J. Curtis Lyter and A. M. Alden, St. Louis, have been invited to deliver addresses at the annual meeting of the Vermillion County Medical Society, at Danville, Ill., September 1. Dr. Lyter will talk on physical examination of the heart and Dr. Alden will talk on chronic discharge of the ear.

The City Counselor of Kansas City has ruled that osteopaths shall be permitted to examine food handlers and certify their freedom from contagious diseases. The Health Director, Dr. Herman E. Pearse, had refused to accept certificates of osteopaths but he is overruled by this decision of the City Counselor.

The advance program of the next meeting of the Inter-State Post Graduate Assembly of America has just been issued. The meeting will take place at St. Paul, Minnesota, October 12-16, in the St. Paul Auditorium. The program is too extensive for publication in detail in our JOURNAL but we may mention that the morning of each day and some of the afternoons will be devoted to medical and surgical clinics. Reading and discussion of papers will take place in the evenings beginning at eight o'clock. There is a notable array of very eminent men listed in the program for conducting

the clinics and reading papers. Among them we find Dr. Hanau W. Loeb, St. Louis, who will conduct a diagnostic clinic on otolaryngology and also read a paper on "The Anatomic Relation of the Optic Nerve to the Paranasal Sinuses," and Dr. Elsworth Smith, Jr., St. Louis, who will conduct a diagnostic clinic on diseases of the heart and kidney and also read a paper on "Further Studies Concerning the Injurious Effects of Arterial Hypertension on the Cardiovascular Renal Apparatus." The foreign guests are: Sir William Arbuthnot Lane, London; Mr. William Blair Bell, Liverpool; Professor Vittorio Putti, Bologna; Mr. Philip Franklin, London; Dr. H. L. McKisack, Belfast, Ireland; Dr. W. H. Parkes, Auckland, New Zealand. The St. Paul Hotel is hotel headquarters. Dr. Ernest Sachs, St. Louis, is one of the vice-presidents. The secretary is Dr. Edwin Henes, Jr., 445 Milwaukee Street, Milwaukee, Wisconsin. He will furnish detailed information upon request.

OBITUARY

HARRY DAIGH CARLEY, M.D.

Dr. Harry D. Carley, St. Louis, a graduate of Barnes Medical College, 1902, died at Missouri Baptist Sanitarium, St. Louis, June 21, 1925, aged 52 years.

Dr. Carley had practiced in St. Louis since his graduation from medical college and was at one time Professor of Hygiene and Sanitary Science at his alma mater. During the World War he gained the rank of Captain and for nearly a year was in charge of the government hospital at Kansas City. After the armistice was signed he was commissioned as Major in the Medical Reserve Corps of the army. He had been a member of St. Louis Medical Society for nearly eighteen years and was a Fellow of the American Medical Association.

LOUIS J. OATMAN, M.D.

Dr. Louis J. Oatman, St. Louis, a graduate of Marion Simms Medical College (now St. Louis University Medical School), 1893, died July 1, 1925, aged 54 years.

Dr. Oatman received his preliminary education at the Collinsville, Illinois, high school and served an internship in the St. Louis City Hospital and also at the Female Hospital (the City Institute for Women, now extinct), later becoming assistant superintendent of the latter. He had been a member of St. Louis Medical Society since 1908 and was a Fellow of the American Medical Association.

SEBASTIAN KLEIN, M.D.

Dr. Sebastian Klein, a native St. Louisian and graduate of St. Louis College of Physicians and Surgeons, 1892, died of nephritis, April 1, 1925, at the age of 56 years.

Dr. Klein had been a member of St. Louis Medical Society for nearly twenty years, and his interest in the affairs of the society had never waned.

ARLANDO C. CURL, M.D.

Dr. A. C. Curl, Schell City, a graduate of Missouri Medical College, St. Louis (now Washington University School of Medicine), 1888, died at his home August 7, 1925, aged 73 years. He had been a member of Vernon County Medical Society for a number of years and was at the time of his death an honor member of the Vernon-Cedar County Medical Society.

BOOKS FOR LEISURE MOMENTS

As "Babbitt" was better than "Main Street" so "Arrowsmith" (Harcourt Brace Co.) is better than either of the other two. It is, as all of Sinclair Lewis' books are, the story of an individual—the individual good and bad with all his weaknesses as well as his finer characteristics. In his other books Lewis held up human frailty and the vulgarities of the individual to the public view. In this book he has looked beyond and in "Arrowsmith" we see the soul of the hero with all the tendencies for good and the urge behind it.

For the first part of the book we go with Martin Arrowsmith through the university and the medical school. Mr. Lewis has given us a professional writer's picturization of the weaker points of medical education as it exists today. In this school is the chance for the Lewis satire and he uses it. Both the educators and the students come in for their share of it and the main point he brings out is the student trying to think for himself and trying to work out the problem as he sees it. All medical men as well as other university graduates know what a trying time that individual has when he tries to expound his own ideas to "those who know."

Martin Arrowsmith was this individual. He was a discoverer, an investigator and an explorer into the land of medical science. He meets Max Gottlieb, the great bacteriologist, and learns his gospel of truth. Max Gottlieb shines forth as a true scientist living only for his laboratory and his research work. Under this spell the real Martin Arrowsmith is

being developed when he meets Leora. Leora is one of the most appealing characters in the book, but after his marriage to her he sets aside Max Gottlieb and his science and becomes a general practitioner. We go with him through his work as a country doctor, a public health officer, a bacteriologist in a clinic and we feel that he is a failure. At last he comes into his own when Gottlieb sends for him and he is in his own realm as a research worker in the great McGurk Institute. Here he discovers the "X Principal" only to find that a French scientist a few months earlier made the same discovery in the Pasteur Institute.

When the plague broke out in St. Hubert in the West Indies Arrowsmith thought his great chance had come. He went there to fight it with the "X Principal" inoculation. He could at last prove to the world the truth of his theories. In doing this he must give the phage to only a part of the population, keeping it from the others in order to test its effects. Leora dies of the plague and Arrowsmith no longer able to stand the strain gives the phage to everyone. He makes his name known to the world, but the satisfaction is not there for he has failed as a scientist. He marries Joyce Lanyon, rich and socially prominent, but is unhappy. Deserting his wife and child he goes to work with Terry Wickett in a small laboratory in Vermont. Here as a scientist he is happy once more with that happiness that is known only to the scientific searcher after truth.

One must read "Arrowsmith" to appreciate the book. A mere outline cannot hold the mirror up to Martin Arrowsmith, to Gottlieb and to Leora as Sinclair Lewis does in his book. He acknowledges his indebtedness to Paul H. DeKruif for most of the bacteriological material found in the book.

It was a green hat that made Michael Arlen famous. Just simply a green hat, a sort of a felt pulled rakishly down over the head of Iris March. All this he tells in "The Green Hat" (George H. Doran Co.) and he tells it with such fascination that one does not lay down the book until that last word has passed one's eyes. No other writer could have written "The Green Hat." It is distinctly "Arlenescque," as the English say, and it is distinctly his own.

Iris March, the heroine, was not a good woman as far as the moral code goes, but the author paints her with such vividness, such sparkle and such brilliance that one finds himself fascinated by her sheer audacity and would really like to meet her. She overshadows all

the other characters in the book and she overshadows the plot. Her rather unusual career and her eccentricities make a story that for three hundred pages holds the reader.

That Iris March was one of the most talked of women in the English speaking world, was brought out on the recent visit of Michael Arlen to America. The first questions he was asked were "Who is she?" "Where is she?" "Did she really live?" And Mr. Arlen answered, she was simply a brain child. She lived only in his brain and he didn't believe there was a woman like her. It seemed disappointing to the American people that they were never to meet this alluring creature, but it proves how realistic Michael Arlen can make his characters.

The tragic ending of "The Green Hat" leaves one rather sad, but marvelling at the perfect workmanship of the author. Iris March with the green hat pulled down rakishly over her head drives her car deliberately into a tree, killing herself but allowing the world to believe it was an accident.

To be distinctly in it one should read "The Green Hat." It is without doubt the best seller and the most talked of book of the year.

Some critics have condemned the book while others have praised it. When the book has been condemned it has been condemned beyond expression but when praised the critics have outdone themselves in their comments. No one ever accused Michael Arlen of mediocrity and that in itself is certainly a recommendation for any author and his book.

P. B.

After the close of the World War the "cheer up" and "how to find happiness" sort of books outsold all the other books in Germany. It seems to be a tradition handed down to us from our ancestors that we wait until we are down and out, before we think we need these books, or begin to read them. Anyone who waits until he becomes ill to read "Fightin' Through," by Nellie Revell (Geo. H. Doran Co.), is making a mistake. Her philosophy, though gotten from the sick room, applies to life in general.

Nellie Revell may have been down but we cannot say she was out, for the spirit that brought a three year invalid back to health in one short year must have been "slumbering still" as she lay submissively on the bed in the hospital. It was a Franciscan nun, suffering as Miss Revell was, and who bore her ailment with patience and submission only to receive death as her reward, that made Nellie Revell start fightin' through. If patience and submission were fatal then she would try the

other method. She started fighting and began it by refusing to eat a cold lamb chop and throwing dishes and chop on the floor. She refused to be submissive and started to be aggressive.

Resistance was her watchword. "Resist—resist—resist. That is the secret of fighting through, whether it be against disease, poverty or disaster. The moment a man concedes a point when he knows he is right, that moment he weakens his morale, diminishes his will power and invites further indignities at the hands of fate."

The author tells us that the president of the Academy of Medicine of New York once told her that in "his opinion the course of study of every doctor and nurse should include at least one operation." Doctors and nurses would then better appreciate why the patient is unable to sleep; that certain medicines nauseate and why certain patients want things that seem peculiar to everyone but themselves. They are, as she says, little quirks of temperament that illness brings to the surface of human nature. "In a medical school the doctor learns about the body, but on the operating table he learns about the soul."

In her observation at the hospital Miss Revell noticed that the nurses' sick room produced the best nurses. They had gone through the ordeal and they were better able to understand the patient. She goes on to say that when she expresses a hope that every doctor and nurse will have at least one operation early in their career, she does not wish them to think she is wishing ill luck on them. She says further: "I merely believe that patients should have the best physicians and the best nurses that there can possibly be. And that is one way to make them best."

The book is divided into four parts "Fightin' Through," "The Reconstruction Period," "Selling Yourself to Yourself" and "Budgeting for Happiness." "Fightin' Through" awakens the fighting spirit, the only spirit that will win. "The Reconstruction Period" is the period of convalescence. "Selling Yourself to Yourself" is to be able to make yourself believe you can, and "Budgeting for Happiness" is the formula for happiness.

The book is short and snappy, some 157 pages, easy to read and easy to digest. The philosophy is brought out clearly and in a manner that is never boring, but is stimulating and helpful. She voices a cry from the sick room, a cry that is made after she is well and able to do it, a cry that is voiced by many who lie helpless but who cannot make the world understand. Doctors, nurses and those people in the everyday world enjoying health should heed that cry.

P. B.

MISCELLANY

REPORT UPON A STUDY OF MEDICAL EDUCATION AND MEDICAL LICENSURE IN MISSOURI, OCTOBER, 1923, TO AUGUST, 1925

INTRODUCTION

On the morning of October 17, 1923, I received a telegram from Dr. Emmett P. North, President of the State Board of Health of Missouri, asking me to make for the Board "an immediate investigation of all our medical schools of the state."

I had received two similar invitations in previous years from him and also invitations from two other states for similar service. All of these I had declined.

However, in view of recent newspaper notoriety together with the fact that this was apparently an invitation from the entire Board it seemed to me the invitation deserved consideration. I therefore replied that I would go to Missouri for conference.

On October 19th I went to St. Louis and there had a conference with the Board, which was in a special session attended by nearly all its members. It appeared that under the amendment to the law approved March 27, 1923, by which the word "reputable" had been restored to the statute in the definition of schools whose graduates were eligible to license in Missouri, it had become necessary for the Board to determine which of the schools of Missouri should be considered reputable. As a basis for such determination it was necessary that the Board know the essential facts as to equipment, facilities and conduct of each of the medical schools of the state.

Inasmuch as under section 9202 R. S. 1919, it is declared that osteopathy is not medicine and surgery, and the licensing of persons to practice osteopathy is not a function of the State Board of Health, it did not seem proper to bring the schools that taught only osteopathy into this investigation.

Since chiropractic has no legal status in Missouri the investigation of the various places where this procedure is taught seemed futile.

Therefore the proposed investigation was to be confined to the investigation. It appeared to me that it was the function of the Board itself to conduct the investigation, and further that every member of the Board should actively participate in order that each member, and especially, its administrative officers, should know and see at first hand the conditions, good and bad, in the medical schools of the State. My function was to be that of an assistant to the Board.

Upon the solicitation of the Board, supplemented by the request of Governor Hyde, I agreed that personally I was willing to participate in this study of medical education in Missouri, but that this personal willingness could be made effective only through the authorities of the university of which I am a full-time employee. Upon the request of Governor Hyde to the President of Western Reserve University, I was advised that the university authorities were not only willing for me to engage in this work but considered it a duty of the university to aid, through members of its staff, in any educational activity as a part of the general function of the university in the way of public service.

INVESTIGATION OF MISSOURI MEDICAL SCHOOLS
Arrangement of dates convenient to the authorities

of the schools and to the members of the Board of Health was immediately begun.

As a preliminary, a questionnaire (identical for all six schools) was sent to each school requesting certain statistical information that could best be accumulated in advance of the visit of the committee of the Board to the school.

It was planned that each of the seven members of the Board should participate in the inspection of the schools and that at least two members should be on the inspection committee for each school and, where possible, four members, which would constitute a quorum of the Board. The personal and profession engagements of Board members made it impossible to distribute the work of inspection equally, so that the final result was as follows:

<i>School Inspected.</i>	<i>Number of members of Board on Inspection Committee.</i>
School of Medicine, Washington University	Three
School of Medicine, St. Louis University	Three
School of Medicine, University of Missouri	Two
Kansas City University of Physicians and Surgeons.....	Five
Kansas City College of Medicine and Surgery	Four
St. Louis College of Physicians and Surgeons	Five

Individual participation of the members of the Board in the inspections:

	<i>Good Schools</i>	<i>Questionable Schools</i>
By Dr. North in five inspections	2	3
By Dr. Wilcoxon in four inspections	1	3
By Dr. Son in four inspections..	1	3
By Dr. Vitt in three inspections	2	1
By Dr. McVay in three inspections	0	3
By Dr. Brunner in two inspections	1	1
By Dr. Enloe in no inspections..	0	0

It will be noticed that Dr. Enloe, the Secretary of the Board, and its active full-time administrative officer, did not participate in any inspections, but that every other member, through such participation, was able to see and learn at first hand the conditions in at least two of the six medical schools of the state.

I assisted the members of the Board in each of the six inspections and was present throughout the time of inspection of each school.

The same method of inspection was followed in each school and was as follows:

1. A general survey of the plant including offices, lecture rooms, laboratories, dispensaries and adjacent hospitals. (We did not visit all of the hospitals used by Washington University and St. Louis University.)

2. A careful inspection of the entrance credentials of all students at that time enrolled.

3. A careful inspection of the credentials for previous medical study of all students then in each school who had been admitted in advanced standing.

4. A careful inspection of reports of teachers and records of grades in the registrar's office.

5. A detailed inspection of the equipment of each laboratory.

6. Where available, inspection of samples of the work done by students.

7. A careful inspection of the dispensary, including methods and completeness of clinical records, amount and character of dispensary material and clinical teaching and practice in the dispensary while in actual operation.

8. Conference as to facilities for and extent of clinical teaching in hospitals.

9. Conference with heads of departments as to the extent, content and character of the instruction given, together with some inquiry into the training, experience and capability of teachers in the subjects which they were teaching.

10. Attendance upon lectures and laboratory work in actual operation where the schedule permitted.

11. Conferences to ascertain as far as possible whether the printed curriculum and schedule was being carried out, including the matter of attendance of both teachers and students.

12. Conferences with the administrative officers of the school as to procedures in admitting students, both as freshman and in advance standing, and verifying of credentials; procedures as to dealing with weak and failing students, removal of conditions, and procedures as to graduation. Also an effort was made to ascertain as to the familiarity or lack of it, on the part of administrative officers of each school, as to what was actually being done in the teaching of the various subjects to bring about efficiency of instruction.

13. Inquiry into the financial resources and scale of salaries in each school.

14. Conference as to the needs of the school.

15. Inquiry into improvements in process or immediately contemplated.

All of the members of each inspection committee were constantly making notes and at the end of a day the members of the committee returned to the hotel and dictated to a reliable stenographer a report of the information secured during the day. This dictation was done in the presence of all who had participated in the inspection and each of them took part in the dictation. Thus the report was made up while the material was fresh in mind and before occurrence of any confusion of facts by inspecting another school. Each of these reports of a committee of the Board to the full Board of Health was signed by all members of the Board that participated in the inspection. It should be noted that these are reports of a committee of the Board and not a report by myself, since I was serving only as an assistant, however, I am in full accord with all the contents of each report. In the cases of the Kansas City University of Physicians and Surgeons, and the Kansas City College of Medicine and Surgery, and the St. Louis College of Physicians and Surgeons, the committee included at all times at least four members of the Board constituting a quorum of the Board.

I have participated in many inspections of medical schools in the past twenty years and in my opinion these inspections of the Missouri schools were as careful, painstaking, complete and impartial as any in which I have participated.

The reports were transmitted to the Board and in a session, at which I was not present, the Board reached a decision as to which of the six schools were, within the intent of the law, reputable and which of them could not be considered reputable by the Board.

The Board found that the Schools of Medicine of the University of Missouri, of St. Louis University

and of Washington University had such facilities, and were so equipped and conducted that there could be no doubt that they are reputable under the intent of the law, and that these are the only medical schools of the state of Missouri that could be so considered.

I believe that the careful action of the Board of Health of Missouri in determining the facts as to equipment, facilities and procedures in the schools of its own state in 1923 have not been equaled by the licensing board of any state.

The signed originals of the reports of the inspections are in the files of the Secretary of the Board at Jefferson City and for purposes of reference and record are suggested to be appendices of this report, and therefore no quotation of their content is here made.

It was agreed that copy of the report on each school should at once be sent by the Secretary of the Board to the Dean of the school concerning which it was made.

The inspections were begun on November 6 and concluded on November 24, 1923.

ASSISTANCE TO THE CONNECTICUT AUTHORITIES

In November, 1923, a special grand jury was called in Hartford, Connecticut, to inquire into alleged irregularities in medical licensure in that state.

On November 27, 1923, Governor Hyde, of Missouri, wired Governor Templeton, of Connecticut, offering my assistance in their inquiry inasmuch as that inquiry involved a considerable number of graduates of certain medical schools of Missouri.

At the request of Governor Templeton I went to Connecticut and on December 3, 1923, testified before the special grand jury as to the conditions found by the Board of Health of Missouri in those medical schools of Missouri, whose graduates were involved in the inquiry in Connecticut. As a result of that inquiry the licenses of 178 medical licentiates of Connecticut were revoked. A considerable number of these had been licensed in Connecticut upon the basis of license in Missouri or of graduation from the Kansas City College of Medicine and Surgery or from the St. Louis College of Physicians and Surgeons.

Approximately seventy-five of those whose licenses were revoked appealed to the higher courts. A master was appointed before whom was heard the appeals of five of the appellants, these cases being agreed upon as test cases. On request of the Attorney General of Connecticut I again went to Hartford and on May 13, 1924, testified before the master regarding the conditions in certain medical schools of Missouri.

The master dismissed the appeals and appeal was then taken to the Supreme Court of Connecticut which has recently affirmed the dismissal of the appeals.

I was thus able to aid the Connecticut authorities in stopping the legal medical practice in that State of some unqualified licentiates insofar as these men were the product of certain Missouri schools.

This assistance to the Connecticut authorities was rendered without any expense to the state of Missouri.

STUDY OF PROCEDURES IN LICENSURE IN MISSOURI

Following the completion of the inspection of the medical schools of Missouri the State Board of Health requested me to study the procedure then in practice in medical licensure in that state with a view to discussion of what changes might be desirable.

ROUTINE OPERATION OF THE BOARD

The Board, consisting of seven members, met regularly four times per year, and occasionally on special call. In the intervals all the details of administration and procedure were entrusted to the full-time Secretary of the Board located at the state capital. All matters of licensure first came to his office and went through his hands. Since the six members of the Board, excepting the Secretary, all lived away from Jefferson City and receive no pay except a small per diem when called in session, these six members could know concerning the details of routine of the Board between the quarterly sessions, only so much as the Secretary chose to communicate to them.

RULES OF PROCEDURE

Conference with members of the Board developed that the procedures regarding application, examination and licensure, including reciprocity, were usually a matter of precedent and recollection and that there was not in existence any codified set of rules to be followed by members and employees of the Board in these matters.

I suggested that it would be wise to elaborate, adopt and publish a thoroughly comprehensive set of rules for the guidance of applicants and of members and employees of the Board in all matters of licensure. The attorney general ruled that such was within the province of the Board.

Such a set of rules should be so formed (1) as to conflict in no point with the statutes, (2) to include the established precedents of the Board, and (3) to provide for uniform action in the future in those procedures upon which there were as yet no established precedents or upon which in the past there had been variability in procedure.

I spent a considerable amount of time in drawing up such rules. These were submitted to the attorney general for opinion as to any conflict with the statutes and it developed that there was no provision in the statutes for reciprocity.

An amendment of 1905 to the statute permitted issuing of licenses on reciprocity, but in the amendment of 1907 this provision was omitted and no reference made to it, and since that time no provision for granting licenses on reciprocity has been in the Missouri statutes. Upon advice of the attorney general, the Board, therefore, immediately ceased to entertain applications for license by reciprocity.

The set of rules which I had drawn up was discussed by the members of the Board, and especially by its officers, at several times during the early months of 1924 but there appeared to be a feeling on the part of the members of the Board, and especially on the part of the Secretary of the Board, that while this matter was worth while it could be deferred since there was no immediate necessity. While some new procedures were adopted, no general set of rules has been published by the Board.

It is my opinion that definite rules regarding applications, conduct of examinations, and issuance of licenses should be worked out, adopted and printed and then distributed to every applicant and to all others who may wish them. This will serve as a guidance to all members and employees of the Board, whether experienced or new to its activities, and will prevent a conflict of opinions often embarrassing. Also it will give to each applicant a knowledge of procedure that will obviate many delays. Had a comprehensive set of rules been in existence and followed during the past five years, many of the

errors and embarrassments which the Board has been compelled to meet would have been entirely avoided, and much individual effort and expense in correcting these errors would have been saved.

ROUTINE OF THE OFFICE OF THE SECRETARY

In January, 1924, I made two trips to Missouri, being away from Cleveland a total of eight days. Most of this time was spent at Jefferson City studying the routine procedure of the office of the Secretary of the Board as far as it related to licensure. This study brought out certain facts of which the following are the more pertinent:

IMPORTANCE OF THE LICENSURE FUNCTION OF THE BOARD

It was very clear that in that office the functions of the Board relating to licensure were considered quite secondary to the other functions of the Board. The great work of the Missouri State Board of Health in regard to the health of the people is well known. The work connected with epidemiology, trachoma, and vital statistics was heavy and insistent and occupied the major interests of the Secretary and his subordinates. As a result the procedures as to licensure were almost incidental.

Licensure matters were largely looked after by a clerk who had many other coincident duties. There were divisions to care for many of the activities of the Board, but licensure was only a joint duty mixed in with many others. It was difficult to place individual responsibility for some of the errors that had occurred.

It is just this neglect of problems of licensure which has brought about in many states, where originally licensure was under the Board of Health, that a separate Board of Licensure has become necessary in order to secure effective operation of the licensing function.

There are certain distinct advantages of having medical licensure under the State Board of Health. In its final analysis it is a health problem and possibly the most important health problem in the state, for unqualified physicians are certainly as great a menace to the health of the people of a state as is any infectious or contagious disease.

However, unless all the members of a state Board of Health have constantly a deep realization of their obligations in licensure, the functions of licensure had better be divorced and put under a separate board, the sole function of which is licensure.

There is probably no more important function that the state performs than to safeguard the people through controlling the practice of the healing art. When it licenses a man it puts the sterling mark of approval by the state on that man and the people should feel that he is qualified and should be justified in this opinion. When any licensing board, or any one of its members, through carelessness, indifference or worse procedures becomes party to licensing unqualified physicians, it or he, at the same time, becomes party to whatever sorrow and suffering of the people results from the lack of qualification in that licentiate.

DIVISION OF LICENSURE

As an early result of investigation of the procedures in the office of the Secretary of the Board of Health, I recommend that there be created a Bureau or Division of Licensure within the Board of Health and that a man well educated, competent, and, if possible, experienced, in matters of licensure be found to give his whole time to this function of the Board, and that, further, he be given an adequate clerical personnel and separate quarters.

Lack of funds prohibited the employment of ad-

ditional personnel, but the Board decided to create a division of licensure and put it in charge of one of the present employees of the Board who should devote approximately half his time to the work connected with licensure and its records.

For this work Dr. Ross Hopkins was selected. He is a well educated and well trained man and has much improved the procedures, but he has had insufficient space, inadequate clerical assistance and from time to time has been called upon by the Secretary of the Board to perform other duties to an extent that continuity has been lost and much delay caused in the revision of procedure and assembling of records and data regarding licensure.

The licensure division needs separate quarters where its records will be accessible to fewer persons; it needs at least one full-time stenographer-clerk; and sooner or later it must have a full-time director. The sooner these improvements are provided, the more rapidly will the former chaotic condition as to medical licensure and registration be brought fully to a status that will be conducive to the greatest welfare of the state.

The manifold administrative duties of the Secretary of the Board make it highly improbable that he can give to licensure the detailed attention it demands. Licensure is a technical procedure involving, as it does, intimate knowledge of present conditions in secondary schools, colleges and especially in every medical school of the country. The conduct of examinations is also a technical procedure and the keeping of records and compiling of statistical information all require undivided attention. When to this is added registration of physicians, in order to have constantly accurate knowledge of the health forces of the state, there has accumulated a responsibility that cannot logically share attention in one man's mind with all the other varied activities of the Board of Health, some of which must take a man to distant parts of the state for considerable periods of time.

The position of director of licensure is a technical and professional post and at no time should be considered a political job to be assigned as a party reward.

SPECIAL EXAMINATIONS

One of the things I wished to ascertain was how it had come that graduates of some of the most notoriously poor medical schools, both within the state and from outside the state, had been licensed in Missouri in recent years. I soon found that some of these had entered by the back door of special examinations. Apparently first during the World War, there had, on occasions between the quarterly examinations, been given a special examination by a single member or by a small committee of the board, and if the applicant satisfied this member or committee he was soon afterward licensed. In the emergency of the War this may have had justification, but since the War there can be no excuse for such procedure when the stated examinations of the Board come at intervals of three months. Every special examination creates immediate suspicion of irregularities by the officers of the Board, by the examining committee and by the applicant. It is a vicious practice.

The number of these special examinations was not great but in most of these cases the applicant was a graduate of a school known to be of a low grade of efficiency in training students. After a discussion by the Board it was ruled that no more special examinations should be granted and none, as far as I know, have been given for nearly two years.

RECEIPT AND ACCEPTANCE OF APPLICATIONS

I spent much time in studying the procedures of receiving and accepting applications for examinations and many of the applications in the files of the Board were carefully studied.

It developed that only in remotely incidental cases was any effort made to verify directly the statements made by the applicant on the blank form furnished by the Board. This was clearly a duty of the Secretary's office.

The affidavit of the applicant was accepted as sufficient to substantiate his statements, and the certificates as to preliminary and as to professional education were accepted as valid. We now know in many cases that these were not dependable.

The provision in the statute that all applications must be filed thirty days before the examination, gives time, in most cases, to verify by correspondence the essential facts stated on the blank. This is clearly the primary reason for that thirty-day period.

The Board had an informal committee on approval of applications which functioned only irregularly. This committee then consisted of the three officers of the Board. Since all applications first reach the Secretary, he was potentially chairman of the committee and therefore primarily responsible for the acceptance of all applications. There is no record on the applications on file that each application was seen by every member of this committee. Since two of the members lived in St. Louis and one in Jefferson City, occasionally a letter of transmission of an application between another member of the committee and the Secretary is found, and also occasionally an initial OK is found on an application. My opinion is that comparatively few applications were, before acceptance, sent by the Secretary to the other members of this committee.

Whether all or none of this committee saw the applications, many were accepted by someone and the applicant admitted to examination when the application was grossly deficient. In many cases the applicant failed to answer all the questions on the blank, some of which were essential information as to education. In one case of a man who was licensed after special examination, and since revoked, no information is given on the application, simply his name is signed.

In another case the applicant states he attended a certain high school, giving no dates. The certificate to substantiate the preliminary education of that applicant simply states what is the course of study in that high school at a date much subsequent to the time when the applicant could have been there as a student. It makes no mention of the applicant, and yet this was accepted as showing graduation by this applicant from a four-year high school.

In another case it is definitely stated the applicant graduated from a two-year high school but this was accepted as sufficient.

Some applications of men licensed in recent years which I wished to study were not in their proper place in the files nor could employees of the Board find them.

These are incidents—confessedly among the worst—of the sort of applications that were accepted whether by the committee, by the Secretary alone or by a clerk, there is no record to show.

Even in the days when the word "reputable" was not in the statute and the Board was compelled to accept for examination a graduate of any medical school, the statute yet provided that he must have a high school education or its equivalent and a careful scrutiny of all applications and verification by

direct correspondence would have eliminated at the threshold of the Board many of these applicants coming from low grade schools.

There is no evidence except in a very few cases that any professional educational opinion was sought as to the sufficiency of the preliminary education offered or the standing of the secondary school in which it was secured.

Education is a profession just as technical as medicine. One would not call upon a high school teacher to diagnose medically a patient, but the procedure here in use called upon a physician, not trained as an educator, to diagnose educationally high school training. The two are equally absurd.

Many of the licensing boards in other states have solved the problem by requiring a state certificate of preliminary education of all applicants for licensure, and in the case of students in the medical schools of its own state, the issue of this certificate is prerequisite to entering the medical school. These certificates are issued by the highest educational authorities of the state only after thorough professional investigation. Beside securing authenticity this procedure also requires that the general education be completed before entering upon professional study, and if the word preliminary means anything it means just this.

It seems to me that after the scandal of county superintendent's certificates from which the reputation of Missouri has suffered, the procedure above referred to as adopted in many states, should be put in operation just as soon as legislation can be secured to permit it, if any new legislation is needed, which seems doubtful if the common-sense interpretation is put on the word "preliminary" already in the statute.

ACCEPTANCE OF APPLICANTS ON WAIVER

Another reprehensible practice that the records show is that over a period of quite a number of years there have been numerous instances of disregard of the provision of the statute and applicants who had not filed their application thirty days before the examination, or whose application was incomplete, have been admitted to the examination. This has even extended to admitting applicants who filed their applications on the first day of the examinations, and in some cases the dates show the application was not filed until after the examinations were over. In all these admittances it appears that the former secretary participated, and in many was initially solely responsible.

Obviously there was no opportunity to investigate the authenticity of the facts stated in an application filed at the last moment, so it was the custom to require waivers in such cases in which the applicant, over his signature, waived any right in the examination until his application was completed and accepted. I have found no record of any of these waivers being enforced, and the examination declared invalid.

Since nearly all these late comers were graduates of schools well known to be inadequate in equipment, facilities, and procedure, there should have been at once a suspicion aroused that there was something the matter with these candidates beside their being dilatory.

Happily this practice has now been stopped and in the June, 1925, examinations, for the first time in several years, there were no candidates admitted on waivers.

VIOLATION OF AGREEMENTS AS TO PROCEDURE

When, in December, 1923, three of the schools of

Missouri were found, for the purposes of the Board, to be non-reputable, it was agreed that no more graduates of these schools should be admitted to examination, but upon advice of the attorney general's office it was held that graduates of these schools who had already been admitted to an examination before the date of this agreement and had failed, were entitled to one re-examination if taken within one year. It was further agreed that of graduates of schools outside the state only those who were graduates of schools of known good repute should be admitted to examination.

When, in January, 1924, Dr. Hopkins was put in charge of licensure procedures, it was agreed that all applications were to pass through his hands and be investigated by him.

These two agreements were clearly violated in the admissions to the examinations of June, 1924. Shortly after the examination President North requested me by wire to come to Jefferson City to inspect the applications of all candidates who had been admitted to the recent examination. I found that seventeen graduates of schools known to be unable to give adequate training had been admitted. These seventeen men, as usual in the examinations, had been assigned numbers by the Secretary. Their identity or presence was therefore not evident. Five of these were entitled to enter under the agreement for re-examination, but of the remaining twelve, six were from a single notorious Chicago school and six more from similar schools in other states, some of them being from the non-reputable Missouri schools. The applications of these twelve were not turned over to Dr. Hopkins for investigation; indeed some of these applications first appeared on the day the examinations began. These applicants were admitted by a clerk from the Secretary's office and she said it was done at the direction of the Secretary of the Board. The futility of admitting these men, and their inadequacy of preparation, is shown by the fact that not one of them passed the June, 1924, examination to which they were admitted.

The study of applications, their acceptance, and the procedure of admission to examinations shows a failure to appreciate the purpose of the application, indifference as to its completeness and authenticity and extreme carelessness in the administration of the procedure of admission to examinations. The major responsibility for this must rest with the Secretary of the Board in whose hands and office was done all the detail of acceptance of these applications.

I believe these derelictions have been thoroughly remedied now and that under the present administrative procedure, the thirty day period is rigidly enforced and the authenticity of the educational statements on each application is adequately investigated before acceptance. This is one of the great improvements accomplished by the Board in the past year.

RECORDS OF THE BOARD

In studying the conditions in the office of the Secretary I sought to ascertain whether the office was able to answer promptly certain proper questions as to licensure and licentiates in Missouri, with the expectation, in case this was found impossible, to devise rearrangement of records by which in the future such proper questions could be promptly answered.

NUMBER OF LICENSES ISSUED IN MISSOURI

The first question to be answered was how many licenses had been issued in the state in the approximately forty years of licensure. The current numbers of licenses were in the 191,000's. If this serial

number was correct it meant an average issuance of about 4,800 licenses per year for forty years. This conclusion was absurd, and therefore the premise of correctness of the current serial number must be wrong.

By consulting the stubs of the license books I found that when the serial number 19,199 was reached, the next license issued was numbered 191,200 instead of 19,200 and for more than a year licenses had been numbered in the 191,000's without anyone in the office appreciating the absurdity of it.

This error was corrected bringing the serial number to about 19,400. Did this actually represent the number of licenses issued? The later work showed it did not. At two or three times in the history of licensure a hundred numbers had been omitted and there were numerous single instances where the same number had been given to two licenses. In addition, for a period, licenses granted after examination and licenses granted by reciprocity were issued from different books of forms the wording being somewhat different, but the same serial numbers were carried in duplicate in the two forms.

All of these errors could have been avoided, if when the blank licenses were printed they had been at the same time mechanically numbered.

I have not at hand data as to the exact number of licenses issued but it can be quickly ascertained from the records now. It is something less than 19,500.

RECORD AS TO OWNER OF A LICENSE OF A PARTICULAR SERIAL NUMBER

If a mutilated license were presented upon which the number was intact could it be determined promptly to whom that license was issued? I found that in the case of issues within recent years it could be done only by reference to the stubs of the license form books, but that the stubs of all licenses issued previous to the fire in the Capitol had been burned at that time, and for those licenses there was no prompt method of securing this information.

The only complete authentic records of licenses which have been issued is the Record of Licenses consisting of three large volumes happily saved at the time of the fire. The entries in these are neither chronological nor strictly alphabetical so that the securing of information from them is a laborious task.

I therefore advised the establishment of a book to be called the Register of Licenses in which should first be entered by a mechanical numbering machine each number serially from 1 to 20,000, and then, from the Record of Licenses, which carries the number of the license issued to each man, was entered in the Register of Licenses opposite each number the name of the rightful owner of that license, together with proper indication whenever the license had been revoked.

This procedure, which was a clerical job requiring care and devotion, has not been completed. It developed the omission of numbers and duplication of numbers as indicated in a previous paragraph. The office is now able at a moment's notice to state who is the rightful possessor of a license of any given number, except in those cases where number duplication has occurred, in which cases it is known the license was issued to one of two individuals. This information has already been found to be of much value in the work of that office.

LIST OF LICENTIATES

The next question asked was who are the licen-

tiates of Missouri and can it be determined promptly whether an individual of a certain name is the rightful owner of a Missouri license.

There was in existence a card catalogue of all licentiates. It seemed necessary to determine whether this was accurate and complete.

To determine this the card catalogue was checked against the Record of Licenses and the Record of Licenses against the card catalogue. This procedure developed numerous typographical errors, mostly minor, in the card catalogue and some omissions. These corrections were made so that the alphabetical card catalogue can now be relied upon.

CORRECTION OF RECORD OF LICENSES

The next question was whether the data in the Record of Licenses is reliable. Therefore all the available minutes of the Board and all the available original applications on file were checked against the Record of Licenses. The minutes and applications since the fire in the Capitol are nearly complete, but those dating previous to the fire are incomplete. This checking developed some, but not many, errors in the Record of Licenses. These errors were clerical, consisting of transposition of figures or initials, misspelling, due usually to illegible handwriting and failure to enter complete names, using initials only. These errors have been all corrected and the corrections transferred also to the card catalogue and to the Register of Licenses already checked against the Record of Licenses.

We may now rely upon the Record of Licenses, the Register of Licenses and the card catalogue insofar as original data are available, the lack in the original data due to the fire, of course, being irreparable.

The card catalogue is contained in a steel cabinet of which the drawers carry rods to retain the cards, but these rods are not locked. I would recommend that drawers with locked rods be supplied and that the key to this be available only to officers of the Board and to the director of licensure. With a constantly changing clerical force and the easy accessibility of the card catalogue it is a simple matter for cards to be taken out for reference and misplaced or lost, whatever be the instructions as to the use of this file. Such an accident would, of course, vitiate the reliability of the card catalogue.

LEGAL BUT UNLICENSED PRACTITIONERS

Does the card catalogue contain the names of all legal practitioners of the state? It is well known that it does not, because for a period after licensure was established the law permitted a man who had been in practice for a given number of years to appear with witnesses before a county judge and upon establishment of reputation as a practitioner he was registered in the records of the county clerk. No report of such registration by the county clerk was sent to the State Board of Health.

For more than a year Dr. Hopkins has been endeavoring to get a transcript of these records from county clerks. This has met with partial success only, since many of these records have been accidentally destroyed or misplaced, but where secured these names, with appropriate data, have been entered on a different colored card and inserted in the card catalogue. It will be impossible ever to make this record of legal but unlicensed physicians complete, but it is believed that it will be completed for all such legal but unlicensed practitioners now living and practicing within the state.

In a few instances men of long standing in local practice who failed to avail themselves of automatic

registration and licensure privileges within the period provided by law when licensure was begun, have been legalized as practitioners by special legislative act. These names with appropriate data have been inserted into the card catalogue.

LOCATION OF LICENTIATES

Could the records answer the question as to whether a given licentiate is living or not, and if living whether he is in practice and where he is located?

It was found that the office had kept no record of a man after he was licensed. Its only source of information was the American Medical Directory, which is confessedly incomplete, and since it is revised and published only bi-annually, there is, in the interval, no record of changes of location or deaths that have occurred within the past two or three years.

REGISTRATION OF LICENTIATES IN MEDICINE

The question of annual registration of physicians has been debated in the medical profession for more than a decade. On the whole the profession, through misunderstanding of its purpose, have frowned upon the proposal, but year after year it is being adopted in state after state. In many other lines that are professional or semi-professional and with definite relation to public welfare, annual renewal of license has long been in vogue. Teachers, stationary engineers and other dignified callings have long had annual or periodical renewal of licenses and fundamentally there seems no more lack of dignity involved in asking of those who deal with the health of the people, such as physicians and dentists, than to ask a voter to register at definite intervals. Dentists already are required in Missouri to register annually. There can be no doubt that it is of advantage to the state to know accurately its health resources, and the most important health resource is the legal practitioners of medicine and surgery. The number and exact location of all physicians, their age, physical capabilities, and experience, when they become matters of easily accessible record are of great value in time of public emergency or calamity. Similar data is constantly on record as to agriculture, mining, water supplies, manufacturing, voters, etc., and it seems that this compilation should extend to physicians in their relation not only to health but also regarding all matters of vital statistics. Moreover, annual renewal of license or annual registration diminishes the danger of misuse of licenses. A medical license in Missouri is now a perpetual license. On the death or removal of its rightful owner it may be taken by an individual who assumes the name of the former owner, or who by erasure and substitution makes it appear to be issued in another name. These procedures are occasionally occurring throughout the country. Annual registration would frustrate the latter plan, and if the licensing office keeps track of deaths of its licentiates it would effectively prevent the former plan.

It was discovered that the statutes of Missouri (Section 5811 R. S. 1919) provide for what is potentially annual registration in that local registrars are required to report annually, among other things, all physicians within their jurisdictions. This had not been operative, but immediately Dr. Hopkins called upon the local registrars for this report so that during 1924 a reasonably complete registration was secured, and in 1925 this has been renewed and notably enlarged and corrected.

These reports were checked against the card catalogue of licentiates and where discrepancies appeared correspondence was inaugurated to ascertain the facts. By this process many of the legal but unlicensed practitioners were located as well as some illegal practitioners. The chief deficiencies in accuracy of this annual list are in the large cities, which by statute are not under control of the State Board of Health. Unfortunately there is no special appropriation available to make this annual registration thoroughly effective, and no provision in the statutes permitting the requiring of a moderate annual fee of each registrant to cover the expense of the procedure.

LOCATION OF LICENTIATES NOT REPORTED BY LOCAL REGISTRARS

The total number of physicians reported by local registrars and secured from the authorities of the large cities is about 6,000.

The 1925 American Medical Directory carries 5806 names of physicians in Missouri. There have been about 19,500 licenses issued. What has become of the 13,000 to 14,000 licentiates not reported to be now in Missouri?

There are three things that may have happened to these. They may be dead, they may have left the state to practice, or they may be living either in the state or out but have ceased to practice.

It is probable that of these 13,000 or 14,000 licentiates 8,000 to 10,000 are dead but no one knows which ones. Deaths of physicians have been reported in medical journals regularly for the past thirty years and files of these journals are available. It is a clerical job to check these death notices against the card catalogue of Missouri licentiates and place the appropriate data on the cards. This would furnish data for a study of vital statistics of physicians in Missouri including age at death, years of practice and cause of death that would be of much interest and also has definite value in the conduct of the office of licensure.

Those of these licentiates who are in practice in other states can be readily ascertained by checking the alphabetical list of the medical directory against the card catalogue of Missouri licentiates. The directory gives data as to name, age and year and school of graduation that will enable any one of reasonably good judgment to establish identity.

This work is not of immediate necessity but it should be done sooner or later in order that the list of licentiates may be divided into a list of those deceased, those still in practice with location and a residuum, which will not be large, of those whose fate is unknown which will include those who have ceased to practice.

The work of establishing the register of licenses authenticating the record of licenses, checking, correcting and completing the card catalogue, and securing the annual reports as to physicians practicing in Missouri has now been in progress for eighteen months. The more important phases have been completed. It has been a long but thoroughly worth while job but its progress was much hampered by lack of working space and inadequate clerical personnel. Dr. Hopkins has carried on the work in face of many difficulties with energy, a fine spirit, and a complete conception of the necessity of meticulous accuracy. The records regarding licensure are now in much better shape than they have ever been before.

However, there is a considerable amount of record material of earlier years in storerooms. This contains much of value, but is useless until gone over

and properly filed. It contains undoubtedly much of value in matters of evidence regarding licentiates.

INVESTIGATION OF COMPLAINTS AGAINST LICENTIATES

In February, 1925, a citizen of the state filed with the Board of Health complaints against approximately sixty licentiates alleging that each had secured his license through fraud and praying that the Board investigate these complaints and, if the allegations were found true, revoke their licenses. Also complaint was filed against one licentiate alleging conduct that warranted revocation of license.

The Board asked me to assist them in the investigation of these complaints. Each investigation was a long and tedious process and involved much correspondence, consultation of records, etc.

As investigations seemed enough complete to warrant public hearing these men were cited to appear before the Board for hearing. Twenty-four of these hearings have been held and decisions rendered by the Board. In some of these cases it was found that the allegations were unwarranted and the cases were dismissed.

All of the members of the Board sat in several of these hearings with the single exception of Dr. Enloe who was present for a few moments on one or two occasions but did not share the tedious burden of sitting as a Board member in any of the hearings.

Of the remaining number not yet heard the investigation of charges is complete in a number of cases and the Board expects to bring them to hearing in the fall or winter. In other cases the investigations are incomplete but still in progress. An investigation is a long process because it often leads far afield and requires correspondence, response to which is often delayed.

In addition to these sixty cases against whom there are complaints there should be investigation of a considerable number of cases extending back for a period of ten years, in which the records seem suspicious especially all those licensed by special examination. In view of what has been learned in the hearings already completed it is evident that the procedures of the secretary's office in failure to fully investigate applications permitted entrance to the examination of many unqualified applicants. Many of these failed to pass the examinations and their cases are closed but others passed and were licensed and the educational records of these need to be investigated if the Board of Health is to fully regain the confidence of the public and the profession in its capacity as a licensing body.

This matter should be vigorously pushed in order to bring a termination at the earliest possible date, to the uncertainty as to qualifications of recent Missouri licentiates. The people are entitled to have matters carried to a point where they may have confidence in every Missouri medical licentiate. The mass of the medical profession of Missouri is entitled to have this matter brought to a speedy termination that suspicion may no longer lie upon the worthy man.

In order to accomplish this it is necessary to add to the personnel at least one educated, experienced man who can give his entire time to these investigations. In addition he must have a reliable stenographer and must have travel expense provided for these investigations can be much expedited if the investigator can go to a locality and consult records rather than depend upon the uncertainties, the delay, and the frequent miscomprehension resulting from correspondence.

If such addition to personnel is not accomplished it must be expected that it will take from one to two years or even more, to clear up these matters under the present methods.

THE PLACE OF EXAMINATIONS IN MEDICAL LICENSURE

There are four major qualifications to be fulfilled before a man or woman should be licensed to practice medicine and surgery, which license carries with it a guarantee and recommendation of the state.

QUALIFICATIONS FOR LICENSE

First and most important is a high standard of moral character in all its phases. There need be no argument that dissolute, dishonest or immoral man or woman is unfit to enter the intimate relation of physician to patient.

No examination can show the quality of morality of an individual. For this the Board must rely upon the testimony of members of the profession, such being chosen because it is assumed they appreciate more fully than a layman the quality of morality requisite in the physician. But unless these sponsors are themselves of high character, and have known the applicant for a considerable period, it would seem their recommendation should carry little weight. An inspection of applications shows that some physicians of high repute, have, perhaps through lack of thorough investigation sponsored candidates whose educational record should have suggested careful inquiry before recommendation was made.

The quality of the sponsors and the length of their acquaintance with the candidate should be scanned with care because this is the only guarantee available as to the morality of the candidate for license and the only protection of the people from the immoral and unworthy physician, and conversely a physician should be very careful as to the quality of a candidate whom he sponsors.

The second qualification for licensure is general education, usually called preliminary education. That this should be completed before entrance to the medical school seems a truism. Clearly its purpose is to prepare a student mentally and intellectually to comprehend the teaching and training of the professional school. If the raw material as it enters the medical school is mentally deficient through insufficient education previous to access to the professional course, there is scarcely any hope that it can gain a training in the medical school adequate to produce a fully qualified practitioner of medicine.

Education and knowledge are quite different things. Education is a process extending over a long period of time and high school education is accomplished in the adolescent period when the mind is most mobile. The preliminary education required by the statute cannot be secured by cramming up and passing examinations consisting of response to queries concerning a few facts, and evidencing only a memory able to retain some facts for a short time. The passing of an examination on the subjects of high school is not, and never can be the real equivalent of a high school education. When the statutes of Missouri infer that the possession of the equivalent of a four-year high school education could be established by an examination before a county superintendent, even when that examination was given "in good faith, they made an inference contrary to fact.

It appears somewhat doubtful whether the boys who paid ten dollars for a McKinley certificate were materially less qualified to study medicine than those who actually took and passed such county superintendent's examinations.

The preliminary education is the basis upon which the whole professional structure, both as student and practitioner, must be built. Meager as is the statutory requirement in Missouri it should be insisted upon to the last letter both as to actuality, authenticity and completeness.

Had this fundamental principle been appreciated and enforced in Missouri during the past ten years, the reputation of the state would be far better than it is today. Had it been rigidly enforced when the word "reputable" was taken from the statute that change would have been far less serious in its consequences.

Laxity in interpretation, verification and enforcement of preliminary education, which has suffered no statutory change, is at the bottom of most of the difficulty in medical licensure in Missouri in the past decade, and for that condition the office of the Secretary of the Board is chiefly responsible.

The third qualification for license is professional education and training. This can be tested only in small part by examination. It, too, is a process and not merely an accumulation of facts held for a time by a more or less retentive memory. Medical education is understanding, observation, appreciation, capacity to reason, judgment and a host of other things that cannot be tested by responses involving only memory. It is contact with apparatus, books, fellow students, teachers, patients. If the school is well kept and clean, a habit of cleanliness is bred into the student quite without his knowing it. If the teachers are capable and highminded a love for truth grows insensibly. If the fellow students are of high character a four years association fortifies the man against deception and intrigue. If the patients around whom he is taught are treated kindly, kept clean, and well attended, the student acquires a habit of thought as to care of patients that will benefit every patient with whom he comes in contact throughout his professional career.

But if the reverse of all these things is true in the school which a student attends, no examination by a licensing board can supply them. The response to the questions in an examination may be accurate, even literally verbatim from the quiz compend, but they cannot supply to future patients all those gradually acquired points of view and capabilities which the student of the good medical school has secured day by day and so gradually that he does not himself know when he became possessed of them, but we, who deal with the product of good schools, see many evidences that he has these qualities and we know they can never be taken from him any more than their lack can be supplied after the medical course is finished.

Hence of the qualifications for a license the character of the medical school where a student was trained, its equipment, facilities, teachers and conduct is the keystone of the structure and no board of licensure of any state that appreciates its solemn obligation to the public can license men trained in disreputable schools no matter what they appear to have done on examinations.

The schools of good repute, and it is well known today which they are, do not graduate men until they reasonably well meet the qualifications requisite for efficient practice.

One wonders what the people of Missouri, as represented by the legislators, wanted when they took the word "reputable" from the law. Did they mean by that act to invite into their homes in intimate and critical relations men who were trained in schools of bad repute or did they perhaps rely upon the licensing examinations to supply all these things

requisite and desirable in the physician, a thing that is quite impossible,

The fourth qualification for license is evidence of ability to safely practice in the medical profession. It is considered to be tested by the licensing examination.

Hence the licensing examination is the last line of defense of the people against incompetency. If the candidate has by subterfuge been recommended as morally fit when he is not; if he has broken through the first line of defense of preliminary education by buying for ten dollars a certificate that he has a general education which he never had; if for a few hundred dollars he has bought a medical diploma certifying a medical education which he has never and can never possess, there yet remains as the last defense the licensing examination. The Board of Licensure is the last line of protection and if through carelessness or worse this fails to stop the mercenary, the people are at the mercy of those who would sacrifice life, health and happiness for material gain.

The preliminary education, the professional education and the licensing examination are all essential in entrance to the medical profession, but in proportion to the standards and enforcement of the two phases of educational requirement, the licensing examination is *inversely* important.

If the standards of both preliminary and professional education are high and vigorously safeguarded and enforced, then there is a high probability that the candidate for license is qualified to make a safe practitioner and the importance of the licensing examination is far less than it is when preliminary and professional educational requirements are low or loosely enforced. In the latter case the licensing examination must be rigorous, searching and comprehensive for by the failure of educational qualifications the licensing examination has become the *only* test of the fitness of the candidate.

As I read the statutes of Missouri (Section 7332 Law of 1923) where it says "the examination shall be of elementary character" I wonder what was in the mind of the man who drafted that section. Possibly his knowledge of English was "elementary" and he meant to say "fundamental," or possibly he felt that in Missouri there would be only elementary (simple) diseases and there would be no need for physicians qualified to treat complex ailments, but finally I concluded the language is purposeful and aims, by statute, to enforce such easy examinations that the product of the poorest school will be reasonably certain to pass, once he is admitted.

I have not attended any of the examinations given for medical licensure by the State Board of Health of Missouri nor have I studied the questions asked nor the grades given. The quality of Missouri licensure examinations has not been included in the scope of my study. But I feel I must record my findings that, in face of the fact that Missouri continues to tolerate within its borders three of the six disreputable medical schools of the country, yet the proportion of graduates of such schools admitted to license in Missouri is less than in several other states of the country and therefore in the face of weak laws the licensing authorities have succeeded in large measure in protecting the people from the product of the low grade schools within its borders.

I have discussed various phases of medical licensure in Missouri critically, vigorously, and I hope constructively in order that new members of the Board and others interested may perhaps profit by frank discussion, calling attention to the pitfalls to escape which requires constant vigilance.

CONCLUSION

I may summarize the more important phases of work of the past twenty-two months as follows:

1. A thorough investigation of the medical schools of the state was made by committees of the Board including all but one member of the Board.

2. Based upon the information thus gained, the Board has made an unassailable division of Missouri schools into a group that are reputable within the intent of the law and a group that cannot be considered reputable.

3. A Division of Licensure has been created within the Board to care for all problems relating to licensure in medicine and surgery.

4. The records of the Board regarding licensure have been checked back to original sources and corrected and correlated.

5. The records have been rearranged so that information can promptly be ascertained.

6. Special examinations have been eliminated. One man licensed by special examination has had his license revoked, and others who were thus licensed have been cited for hearing before the Board.

7. Routine procedures have been put in operation to verify the educational history of each new applicant for licensure.

8. Carelessness in regard to admission to examinations has been completely eliminated.

9. A reasonably accurate register of all physicians now practicing in Missouri has been established and procedures inaugurated to correct this annually.

10. A considerable number of complaints against licentiates in regard to the method of securing their licenses have been investigated, public hearings held and as a result in some cases licenses have been revoked.

The following additional observations are warranted:

11. The chief energy and encouragement for this work and the initiative and constant support of it have been furnished by the President of the Board who has always been ready to help me in every detail of the work.

12. The matters needing correction have almost entirely arisen from faulty operation of the Secretary's office in which the members of the Board, other than the Secretary, cannot be called upon to share equal responsibility because the organization of the routine of the Board entrusted nearly all detail to the Secretary, with meetings of the entire Board only at three-month intervals.

13. There has been an extraordinarily marked improvement in the operation of the Secretary's office regarding matters of licensure in the past eight months under the new Secretary of the Board.

When one considers the conditions two years ago, and in comparison those of today, it is apparent from every approach that there has been tremendous improvement. This improvement has been accomplished only after much effort and hard work on the part of the Board, and especially in the past year on the part of its present officers. The amount of time, thought and personal sacrifice contributed by President North has much impressed me from the first.

This work, like every work to improve conditions has had to combat five retarding elements.

First. The inertia of precedent and custom, including a subconscious belief that what was, was good enough.

Second. The astutely organized opposition of those who profit by present conditions and want no betterment; in this case a part of a nearly nation-

wide organization deriving profit from traffic in educational, and especially in medical credentials and diplomas.

Third. A confusion of ideas, among those earnestly desiring improvement, as to just what changes are needed.

Fourth. Lack of comprehension of the intermediate steps necessary to bring about reform and

Fifth. A rather general sentiment of "let the other fellow do it."

There remain four primary lines of further progress which the Board must follow:

First. The Division of Licensure needs further support of funds and personnel to the end that the health of the people be safeguarded. It has in the past eighteen months accomplished much but its usefulness will increase with each year and its duties will become broader and more comprehensive as its importance and helpfulness comes to be more fully appreciated.

Second. There is need of a vigorous program to correct the errors arising from carelessness of procedure in licensure during the past decade, to the end that every unqualified practitioner who has secured his license through fraud be considered a menace to the public and steps be taken to revoke his license.

Third. A thoroughly comprehensive set of rules covering all phases of procedure in licensure should be evolved and published.

Fourth. A problem, common to every licensing board in the United States, which consists in improvement in the quality and character of examinations to more nearly perform the function of testing the capability for practice instead of the knowledge of unrelated facts.

This is a technical question which will require careful and correlated study, and is interlocked with the changes in medical education that are just beginning. Together they constitute a ten-year program and Missouri should bear its share of the labor which will be entailed.

These are the major problems that face this Board and with the deserved support of public opinion they can all be accomplished.

This report has been delayed because the original purpose was to include much statistical matter which could not be compiled until certain work was completed in the Division of Licensure, which has been delayed by reason of insufficient clerical assistance.

It seems best now to forego this statistical matter and report at once. This report has not been suppressed, as some have asserted, nor has any member of the Board counseled delay. The delay has been upon my own initiative.

I have attempted to cite the more important phases of the work in which I have been privileged to assist, but much of the detail necessarily has been omitted. The facts stated I believe to be true in every case. The opinions expressed are worth only as much as my experience and judgment make them worth. How much or how little this may be remains for the Board to judge.

I have spent between October 19, 1923 and August 21, 1925, on this work with the Board of Health a total and sixty-seven days away from my home city.

In conclusion I wish to express my sincere appreciation of the uniform courtesy extended to me by every member of the Board, every employee of the Board, and every state officer with whom the work has brought me in contact.

Very respectfully submitted,

FREDERICK C. WAITE.

Cleveland, Ohio, August 22, 1925.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, FOR 1925

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID THE STATE ASSESSMENT FOR ALL
THEIR MEMBERS)

Benton County Medical Society, October 10, 1924.

Chariton County Medical Society, December 20, 1924.

Camden County Medical Society, December 29, 1924.

Madison County Medical Society, January 21, 1925.

Montgomery County Medical Society, January 22, 1925.

Clark County Medical Society, January 30, 1925.

Cape Girardeau County Medical Society, February 10, 1925.

Dent County Medical Society, February 19, 1925.

Webster County Medical Society, February 26, 1925.

Ste. Genevieve County Medical Society, March 24, 1925.

Ralls County Medical Society, April 2, 1925.

Caldwell County Medical Society, April 4, 1925.

Taney County Medical Society, April 6, 1925.

Christian County Medical Society, April 15, 1925.

Monroe County Medical Society, April 20, 1925.

Cooper County Medical Society, April 28, 1925.

Morgan County Medical Society, May 7, 1925.

Laclede County Medical Society, May 29, 1925.

Scott County Medical Society, June 20, 1925.

DeKalb County Medical Society, July 21, 1925.

Carter-Shannon County Medical Society, August 24, 1925.

Ray County Medical Society, August 28, 1925.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

One Hundred and Twelfth Meeting, April 15, 1925

1. PRESENTATION OF CASES.

A. A CASE OF ENCEPHALITIS LETHARGICA.—By DR. P. J. ZENTAY.

This case is presented because it showed certain symptoms not mentioned before in lethargic encephalitis.

G. C., a boy, 13 years of age, was admitted to the St. Louis Children's Hospital on Dec. 26, 1924. At this time he presented the typical picture of an encephalitis lethargica. He was in deep lethargy, had ptosis of the eyelids, showed marked rigidity of extrapyramidal type, and also catatonic symptoms. During the first four weeks of his illness he did not show anything unusual for a case of encephalitis. The lethargy persisted with slightly changing intensity, the rigidity gradually increased, fixing the extremities in the so-called decerebrate position, and a very marked bilateral foot drop developed due to a peripheral peroneal neuritis. A profuse perspiration limited to the neck and the head, and polydipsia of a week's duration were evidences of involvement of the vegetative nervous centers.

In the fifth week of his illness, patient began first to suck, then to bite on his lips and tongue. One night, while not being watched, he chewed up a considerable part of his lower lip and the left

side of his cheek. As the chewing grew more and more violent different devices were tried to prevent patient from doing more damage to himself. Different forms of splints were placed between the teeth, but gave only temporary relief as they very soon were broken and had to be removed. The chewing got so violent that patient broke all but two of the teeth in his lower jaw. The attacks of chewing persisted for about a week and then gradually disappeared and patient began to improve in every way. The interesting feature of the attacks of chewing was that patient seemed to be conscious of what he was doing and could tell a short time before the attacks appeared, but he was unable to stop them or resist the compulsion producing the chewing movements. When asked later about the chewing he did not remember it.

We have no adequate explanation to present for the cause of these chewing attacks, but they have to be looked upon as some sort of a compulsion probably produced as release phenomena through the exclusion of a higher inhibiting center due to the damage done to the basal ganglia.

DISCUSSION

DR. P. A. SHAFFER: I would like to ask Dr. Zentay about the blood chemistry in these cases and whether blood calcium has ever been determined.

DR. ZENTAY: As far as the literature is known to me, blood chemistry of these cases has been very little investigated and I don't know of any figures on blood calcium. I was interested in and am conducting investigations on the function of the liver in cases of encephalitis as the pathological relationship to Wilson's disease suggests that certain disturbances might be found.

B. AN UNUSUAL CASE OF ACUTE LYMPHOBLASTIC LEUKEMIA. — By DR. H. L. ALEXANDER.

L. J. McG., age 29. White. Carpenter. Chief Complaint: Skin eruption. Weakness. Family History: Irrelevant. Past History: Nose bleeds on slightest trauma during childhood until the age of 15. None since. Never any rash; never jaundiced, and excepting for measles and pertussis in childhood, has had no illness. Work History: Taken out of school at age of 7 and put to work on a farm; after 10 years of this, took up carpentering and has worked steadily at this ever since. Has come in contact with no benzol or other chemical solvents.

Present Illness: About four months ago while getting out of a bathtub noticed a spot similar to a bruise between the shoulder blades. Shortly thereafter similar spots came out on all parts of his body; in addition to these there were fine bright red pinpoint spots. The whites of his eyes became "beefy" in appearance and there was bleeding inside of his mouth. All parts of the body were so affected but these were less marked on extremities than elsewhere. Two months after onset glands in the neck enlarged and face became much swollen. Within the last two weeks this has subsided somewhat. There was a general weakness, patient gave up work, consulted many physicians, took much medicine without relief. No gastro-intestinal symptoms; no cardiac symptoms; no nose bleed; no blood in stools or urine. No other symptoms excepting a recently developed tenderness over the entire skin. Has lost about 9 lbs. in weight since onset.

Physical Examination: Well nourished and developed. Temperature 36.4. Pulse 90. Respirations 22. Striking general appearance with deep purplish

blotchy discoloration of the face and innumerable hemorrhagic spots and streaks over the skin of the thorax and back and shoulders, less so on the extremities. These are of various sizes and some are indurated and are apparently skin tumors. Mucous membranes of the conjunctivæ and mouth as well as scleræ show diffuse hemorrhages.

There is a general moderate enlargement of lymph glands of neck, epitrochlear and inguinal regions.

Mouth. Gums retracted, bleeding and show pus. Teeth somewhat carious. Lungs essentially negative. Heart not enlarged. Regular. Sounds good quality. B/P 110/60. Abdomen. Liver felt about 3 finger breadths and spleen 2 finger breadths below costal margin.

Laboratory. Blood RBC 1,960,000. WBC 3,200. Hb 30%. Index 1.

Clotting time $4\frac{1}{2}$ minutes. Bleeding time 3 minutes. Platelets 153,000.

Differential PMN 20%, SL 50% Endothelial and LMN 20%. Eosin 4%. Lymphoblasts 22%. Oxidase stain, negative.

Urine 1,025. Acid. Faint trace albumin. No RBC, many WBC, no casts. Benzidine, negative.

The presence of a relative lymphocytosis, the large number of lymphoblasts, purpura, lymphadenopathy, skin tumors and leucopenia are all compatible with acute lymphatic leukemia, in an aleukemic phase.

The unusual features presented in this case are the rather late age of onset, the insidious development of symptoms, the absence of stomatitis, and the fact that the process has lasted $4\frac{1}{2}$ months, the patient was still up and about and generally in fair condition.

However, the removal of a skin nodule and an epitrochlear lymph node, shows these structures infiltrated with lymphoblastic tissue, to such an extent that their normal architecture is completely defaced. Pathologically these lesions are considered characteristic of acute lymphoblastic leukemia.

DISCUSSION

DR. CHARLES A. STONE: What have you done for this man?

DR. ALEXANDER: We transfused him, but unfortunately in the aleukemic phase the measures usually employed to reduce the blood count are out of the question.

2. A PHARMACOLOGIC INVESTIGATION OF THE EFFECT OF SODIUM BENZYL SUCCINATE AND SODIUM DIBENZYL PHOSPHATE UPON THE RESPIRATORY AND CARDIO-VASCULAR SYSTEMS.—By DR. CHAS. M. GRUBER.

One gram sodium benzyl succinate is soluble in 2 ml. water or Ringer's solution at room temperature 24.6° C. Sodium dibenzyl phosphate is soluble in distilled water at room temperature 24.6° C in the proportion of one gram of the salt to 6 ml. water. The presence of calcium salt causes an insoluble flocculent precipitate to be formed. It is therefore insoluble in Ringer's solution and in the blood. Both drugs appear to stimulate the respiratory center temporarily, causing an increase in rate with decreased depth followed by a slowed rate and increased depth. Large doses cause paralysis of the respiratory center.

These drugs were injected 68 times in dogs, 8 times in cats and 17 times in rabbits. The number of injections in dogs were equally divided between sodium

benzyl succinate and sodium dibenzyl phosphate. Over 67 per cent. of the injections of the former drug and 35 per cent. of the latter produced rises in blood pressure. These rises averaged 13 and 17.3 per cent respectively. The remaining number of injections caused either a fall in blood pressure or a fall followed by a rise.

Intraperitoneal injection of sodium benzyl succinate in cats causes a prompt increase in blood pressure in some cases as much as 75 per cent. This sudden rise was followed by either a slow rise or a fall in blood pressure.

Intravenous injections of these drugs cause the volume of the intestine and kidney to increase but that of the limb to decrease. Perfusion experiments support these findings.

Plethysmograph and myocardiograph records of the heart show these drugs, when injected intravenously in large doses, to cause dilation of the heart, slowed rate and finally cardiac paralysis. Small doses appear to increase the tonus, force and rate of contraction. Perfusion experiments of the rabbit and cat's heart confirm these findings. Both drugs cause dilation of the coronary artery in small doses and constriction in larger ones. Local application of these drugs to the terrapin and frog's heart causes a decrease in the rate and force of contraction of the heart.

From these experimental observations it would seem that these drugs would be of doubtful value in the treatment of clinical cases of arterial hypertension.

DISCUSSION

DR. ERLANGER: I should like to ask Dr. Gruber what was the dosage employed in these experiments relative to the amounts recommended by the manufacturers of the drugs? Furthermore, have moderate amounts of the substances been administered over longer periods of time, and if so, have the effects been other than those he has described?

DR. ALEXANDER: Have you done any lung perfusion experiments?

DR. GRUBER: As to Dr. Erlanger's question: These doses are much larger than those used therapeutically. Only with the larger doses did we get a decrease in blood pressure. Small doses tended to decrease the volume of the heart and increase the tonus while at the same time the blood pressure either increased or showed no change. We administered these drugs by mouth without results. In cats intraperitoneal injections, of sodium benzyl succinate were followed by increases in blood pressure and the sodium dibenzyl phosphate injections caused a sudden rise in blood pressure followed by a fall.

As to Dr. Alexander's question: We did not perfuse the lung. In fact the benzyl succinate which he mentions is insoluble in water. These preparations could be used. Using the Jackson method of studying the effect of drugs upon the bronchial musculature, Mason and Pieck showed that benzyl benzoate did not relax the contracted bronchial muscle following the intravenous injection of codeine sulphate and other bronchio constrictor drugs.

3. BONE TUMORS IN MUSCLE.—By DR. CHARLES A. STONE.

This is a series of thirty lantern slides of X-rays showing in seven patients the condition known as myositis ossificans circumscripta. Six were young males in whom the tumor appeared after an injury. Four of the six had the femur affected and in one of this group both sides were involved after separate injuries. Of the remaining two, one had the bony deposit beneath the patellar tendon, while in

the other a synostosis was formed between the tibia and fibula near their distal ends.

The seventh patient was a woman without history of injury but with a bony growth in the lateral border of the quadriceps at mid-thigh.

In all instances there was considerable disability.

Five excisions were done on four patients. In four the growth was attached to the bone while in the case of the woman it was not. Microscopic examination showed bone and fibrous tissue. All recovered good function.

Two males recovered with disappearance of the tumor during physiotherapy. The seventh young man has not consented to removal.

DISCUSSION

DR. ARCHER O'REILLY: The cases described by Dr. Stone are very interesting. I believe that the question of sarcoma was raised in some of the earlier cases. Specimens from these have been examined microscopically, I believe. I should like Dr. Stone to tell us something about his pathological examination and also about the end results.

DR. ARTHUR STRAUSS: I would like to ask whether or not these bony formations occur in scorbutus?

DR. CHAS. A. STONE: These tumors are not exactly similar to sarcomas because they occur on the shaft of the bone, while sarcoma is more likely to occur nearer the epiphysis. In operating for removal of the bone tumors, the trouble has been cured. Some of them were cured without any operation. I have seen many of these bony growths accompanied by periosteal hemorrhage in scorbutus. One writer on the subject feels that there is a tendency for these cases to become malignant. My idea, however is that they are not malignant, nor have they any tendency to malignancy. They do not look like a malignant thing.

4. THE INTRANASAL TREATMENT OF RETROBULAR ABSCESS.—By DR. R. J. PAYNE.

Orbital abscesses are situated in the orbital fat and develop from ocular inflammation, periostitis, injuries or extension of infection from accessory nasal sinuses, displacing the eyeball forward, retarding its movements, causing congestion and swelling of the eyelids and conjunctiva. Sixty-five per cent. of all cases are traced to sinus infection and of these the ethmoid predominates.

Treatment: The gravity of this condition demands early surgical intervention when the diagnosis of orbital abscess has been made. The best results have been obtained by the intranasal approach establishing drainage through the nose. The slides shown demonstrate the thorough drainage of the abscess at its most dependent area. A case report of a child three and one-half years old, recovering completely from this type of operation demonstrates the superiority of this method to the external operation.

PRESENTATION OF CASE AND DISCUSSION OF PAPER

DR. LAWRENCE POST: Abstract of case: R. P., boy, aged 4. Sick five days with increasing exophthalmos and divergence of the right eye. Marked edema of orbit with redness of skin. Temperature 101. Eye grounds normal. Child vision was present. Nasal examination showed pus in middle meatus on affected side. X-rays showed shadow in ethmoids and antrum. Perforation through ethmoids into orbit by Dr. Arbuckle opened large retrobulbar abscess. Continued improvement followed this.

The commonest cause of retro-bulbar abscess is infection of the posterior nasal sinuses occurring in about 60 per cent. of the cases. The usual signs of retro-bulbar abscess are swelling of the orbital tissues associated with exophthalmos; divergence of the eye ball, oftenest downwards and outwards; diplopia; failing vision; local pain and fever with leukocytosis. Intervention of some sort must be done before the sight has long been absent, otherwise, relief of pressure will be too late to restore vision. When the diagnosis is definitely established and there is an associated sinusitis, drainage of the abscess through the opened nasal cells is the most satisfactory procedure.

The differential diagnosis between cavernous sinus thrombosis and retro-bulbar abscess is often very difficult. In the former the veins of the retina are usually dilated. When there is no valve in the communicating vein between the ophthalmic and angular veins, the outflow by this course may be sufficient to prevent dilatation of the retinal veins. In orbital abscess there is pain; edema, confined largely to the orbit; the eye proptosed away from the mid-line, while in cavernous sinus thrombosis there may be no pain; generalized edema of forehead and both eyes; proptosis in the mid-line. Orbital abscess is rarely bilateral and the patient is generally not desperately ill. In thrombosis the condition is usually bilateral and the patient very ill. Owing to an extension of the thrombosis into the transverse sinus, the vein of Santorini may be blocked thus causing edema in the mastoid region which is very suggestive of sinus thrombosis.

THE MEDICAL SOCIETY OF ASSISTANT PHYSICIANS OF STATE HOSPITALS

The seventh meeting of the Medical Society of the Assistant Physicians of the Missouri State Hospitals was held at the Missouri Colony for Feeble-minded and Epileptics at Marshall, Missouri, Tuesday and Wednesday, April 21-22, 1925.

The members present were Dr. W. S. Loveland, Mt. Vernon; Dr. F. H. Fuson, Farmington; Dr. S. U. Wykoff, Fulton; Dr. Elizabeth D. Carroll, St. Joseph; Dr. E. S. Evans, St. Joseph; Dr. Florence P. Chapman, Marshall; Dr. R. C. Robertson, Marshall.

By invitation of Dr. E. E. Brunner, the Saline County Medical Society and its Auxiliary met with the society. All of the Marshall physicians and their wives were present. Those from out of town attending were Dr. and Mrs. Luther James, Blackburn; Dr. and Mrs. M. S. McGuire, Arrow Rock; Dr. and Mrs. G. A. Richart, Blackburn; Dr. and Mrs. F. A. Howard, Slater; Dr. and Mrs. Lee Shuck, Nelson; Dr. and Mrs. J. F. Jarvis; Dr. and Mrs. J. H. Owen, Mrs. Ed. O'Rear, and Mrs. C. K. Smith, of Sweet Springs; and Dr. Fred Stahl, Malta Bend.

At 9:00 a. m., Tuesday, the meeting was called to order by the president, Dr. Elizabeth D. Carroll. As the secretary was unable to attend the meeting, the minutes of the last meeting were read by Dr. E. E. Evans and were approved as read.

A motion was made and seconded that Dr. Johns be asked to secure the statistical manuals of the American Psychiatric Association and the National Committee for Mental Hygiene both for the hospitals for mental diseases and for the feeble-minded, so that uniform statistics and reports may be kept at each institution. The motion carried unanimously.

A motion was made and seconded that the Com-

mittee on Library be instructed to purchase the books for each institution immediately. The motion carried unanimously.

A motion was made and seconded that the next meeting of the society be held at Farmington, June 16-17. The motion carried unanimously. This concluded the business meeting.

An address of welcome was delivered to the members and visitors by Dr. E. E. Brunner, Superintendent of the Colony.

A paper was read by Dr. Florence P. Chapman on "Casual Factors of Feeble-Mindedness." She illustrated the different types with a clinic. The paper was discussed by the members.

Dr. R. C. Robertson read a paper on "Epilepsy," after which he conducted a clinic. General discussion followed.

The meeting adjourned for lunch at noon and at 2:00 p. m. the members and visitors were taken for an inspection of the School Department.

A dance was given in the evening. Music was furnished by the Colony Orchestra. The Girl Scouts of the Colony gave a number of pretty folk dances.

Wednesday morning the members made a tour of the institution.

The following resolutions were unanimously adopted:

WHEREAS, The Medical Society of the Assistant Physicians of Missouri State Hospitals held its meeting at the Colony for Feeble-minded and Epileptics at Marshall, Missouri, April 21 and 22, and

WHEREAS, Dr. E. E. Brunner, Superintendent of said institution, rendered valuable assistance toward its success; therefore be it

Resolved, That the society extend to Dr. Brunner its sincere thanks and appreciation for his efficient and instructive address on subjects pertaining to feeble-mindedness and epilepsy given to the society and that this resolution be included in the minutes and a copy be handed to Dr. Brunner.

DR. WYKOFF,
DR. FUSON,
Committee.

The meeting adjourned at noon Wednesday.

E. E. EVANS, M.D.,
Secretary, pro tem.

JOHNSON COUNTY MEDICAL SOCIETY

Johnson County Medical Society held its quarterly meeting in conjunction with the District Meeting of the Fifteenth Councilor District at the Warrensburg Clinic in Warrensburg, July 9. The members of Bates, Vernon, Henry, Lafayette and Cass Counties were invited. Henry County was represented by Drs. W. E. Baggerly, La Due; J. G. Beaty, F. M. Douglass, J. R. Hampton, Wm. Kelly, E. C. Peelor, R. D. Haire, G. S. Walker, Clinton; J. H. Walton, Windsor. Lafayette County was represented by Drs. C. H. Allen, R. C. Schooley, Odessa; E. F. Martin, Corder. Daviess County was represented by Dr. J. B. Graham, Jameson. Members of Johnson County present were: Drs. J. I. Anderson, J. T. Anderson, J. W. Bolton, T. J. Draper, O. B. Hall, W. E. Johnson, W. R. Patterson, L. J. Schofield, all of Warrensburg; W. S. Murray, W. G. Thompson, Holden; E. Y. Pare, Leeton; H. C. Park, J. E. Porter, Knobnoster. Visitors were: Drs. Emmett P. North, St. Louis, President of the State Medical Association; E. J. Goodwin, St. Louis, Secretary of the State Medical Association; Logan Clendening,



ON THE LAWN OF DR. H. F. PARKER'S HOME, WARRENSBURG

J. Park Neal, Kansas City; James Stewart, Jefferson City, Secretary of the State Board of health.

The meeting was called to order by the president of Johnson County Medical Society, Dr. J. I. Anderson, and was opened with the introduction of Dr. North who made a splendid talk. Dr. North plans to make an organized campaign of the state with the State Medical Association to instruct the people on public health problems. He characterized the state medical practice act as weak and predicted direful results unless it was amended to control pseudo medics. Chiropractors and others who apply for license from the state were recommended to be subject to the same examination as an M.D.

Dr. Goodwin spoke of the importance of organizing the county medical societies and on periodic health examinations.

Dr. Logan Clendening presented a clinic of three cases of mitral insufficiency; also three cases of tuberculosis, outlining treatment for each case.

Dr. J. Park Neal held a surgical clinic, presenting two cases of hernia, explaining the various operations for this defect. He also presented several other cases bringing considerable discussion from the members present.

The Johnson County Medical Society is grateful to the visiting doctors who gave talks and held clinics.

Dr. Hendrix, President of State Teachers College, invited the doctors to visit the school and the ladies of the school faculty served lunch. The doctors were then shown through the various buildings of the school.

The Woman's Auxiliary held an afternoon meeting on the lawn of the home of Dr. and Mrs. H. F. Parker, at which Mrs. M. P. Overholser, Chairman of the State Auxiliary, addressed the meeting. The Woman's Auxiliary served a picnic supper on the lawn after the meeting. This was greatly enjoyed and appreciated by all.

T. J. DRAPER, M. D., Secretary.

BOOK REVIEWS

THE DIAGNOSIS OF CHILDREN'S DISEASES. With Special Attention to the Diseases of Infancy. By Professor Dr. E. Feer, Director of the University Children's Clinic, Zurich, Switzerland. Translated by Carl Ahrendt Scherer, M.D., F.A.C.P. Philadelphia and London. J. B. Lippincott Company. Price \$7.00.

In this volume Dr. Feer confines himself wholly to the diagnosis of the diseases of children, particularly stressing those of the newly born and of infants. His wide clinical experience enables him to supply original material and facts gleaned from his own practice. The work is well systematized, taking up individual symptoms and systems of the body in a regular manner.

The history of the case and the importance of a complete past history are stressed. Such headings as: Nutrition, Thymus, Heart, Lungs, Genitourinary System and Skin, Hair and Teeth, etc., indicate the thoroughness that characterizes the whole work.

The text is well illustrated, containing over two hundred and fifty instructive cuts.

The general practitioner, as well as the pediatrician can gain valuable data from this laudable work.

V. E. H.

THE SURGICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume V, Number III. (Mayo Clinic Number—June, 1925.) W. B. Saunders Company. Philadelphia and London.

This issue of the Surgical Clinics of North America contains numerous articles from the different clinics at the Mayo institution. Beginning with an article on "Filtration Phenomena in Relation to Clinical Medicine," by William J. Mayo, the 893 pages in the book contain discussion with clinical demonstration of a wide variety of surgical conditions. The book contains numerous illustrations which add much to the value of the text.

DISEASE AND DEFORMITIES OF THE FOOT. By John Joseph Nutt, B.L., M.D., F.A.C.S., Professor of Orthopedic Surgery, Polyclinic Medical School and Hospital. Second edition. Cloth. Price \$4. Pp. 309, with 105 illustrations. New York. E. B. Treat & Company. 1925.

Nutt has written a book which very adequately fulfills the purpose for which it was intended; that is, a short treatise for the use of the general practitioner in the treatment of pedal conditions.

The chapters on Anatomy and Physiology are excellent, and bring out the salient points in a clear and easily understood manner.

The very important subject of the shortened Tendo-Achillis is considered in a most satisfactory manner, and the treatment advised is sound.

Congenital club foot is on the whole adequately considered, but we must protest against advising the use of braces in the early treatment of this condition in a publication of this character, intended for the general practitioner. Braces even in the hands of those experienced in their use are often unsatisfactory in the early treatment of congenital club foot, and in the hands of those inexperienced in their use, may lead to disaster. It is also the consensus of opinion today that club foot walking braces should always come above the knee and that the Taylor type as advocated by Dr. Nutt is of little value. In the operative treatment of club foot, the Phelps operation had better have been omitted as it has no place in the treatment of club foot at any time.

Gonorrheal and tuberculous foot conditions are discussed briefly but satisfactorily. Perhaps the author is too conservative in his views of the operative treatment in the latter condition in view of our present-day knowledge.

In the treatment of bunions, the after treatment is given too little consideration. The Keller operation might well have been given a place as it is much simpler and usually more effective than that described.

On the whole, this very excellent 2d edition of the treatise by Dr. Nutt can be heartily recommended to the attention of the general practitioner and even those who specialize in the treatment of foot conditions. The exposition of the subject is clear cut and comprehensive, and the treatment throughout is sound. There is no part of the body which receives less attention or is more inadequately treated than the foot, and therefore this book of Dr. Nutt's might well find a place in the library of every practicing physician.

F. D. D.

THE PRACTICAL MEDICINE SERIES: Comprising eight volumes on the year's progress in medicine and surgery. Under the General Editorial Charge of Charles L. Mix, A.M., M.D. Volume 4. **PEDIATRICS.** Edited by Isaac A. Abt, M.D. Series 1924. Chicago: The Year Book Publishers. 1925. 381p. Price \$2.00.

For the past twenty years Dr. Abt has edited this volume which annually presents a résumé of the preceding year's progress in pediatrics. Heretofore the sections devoted to pediatrics and orthopedics have appeared in the same volume, but the present issue marks a separation of the two. It is distinctly helpful for both general practitioner and specialist to have presented for his hurried consideration these brief reviews of recent literature which furnish not only references to the original article but also occasional pithy comments by the editor. The present volume is exceptionally interesting because of the recent advances made in the study of

the infectious diseases. For example, articles are abstracted which deal with the Dick and extinction tests in scarlet fever, the use of convalescent serum in the prophylaxis of measles and varicella, vaccination against chicken pox, the Schick test and diphtheria immunization with toxin-antitoxin mixtures, the use of the X-ray in whooping cough, etc. For the physician who finds difficulty in keeping up with the voluminous literature on pediatrics, this little book should prove of great value and may be heartily recommended.

T. C. H.

OPERATIVE GYNECOLOGY. By Harry Sturgeon Crossen, M.D., F.A.C.S. Professor of Clinical Gynecology, Washington University Medical School, and Gynecologist in Chief to the Barnes Hospital and the Washington University Dispensary, etc. Third Edition. Eight hundred and eighty-seven original illustrations. St. Louis. The C. V. Mosby Company. 1925. 677 pp.

This book is a concentrated extract of the teaching experience of many years. It represents the opinions of gynecologists of today.

The chapter on Radium brings the subject up-to-date, but impresses one with the incompleteness of today's knowledge. The chapter on Radium Therapeutics that will be published thirty years from now will indeed make interesting reading.

Operative treatment of retroversion uteri in this book is entirely original, which is a very unusual thing in a medical book of today. The more than one hundred ways of treating the round ligaments have finally sifted down to two or three and these are described in a masterly manner.

No practitioner who does any gynecology can afford to be without this book.

W. C. G.

FROM INFANCY TO CHILDHOOD. The Child from Two to Six Years. By Richard M. Smith, M.D., Assistant Professor of Child Hygiene, Harvard University; Associate Physician, Children's Hospital; Visiting Physician, Infant's Hospital, Boston. The Atlantic Monthly Press. Boston. Price \$1.25.

This little book of about 100 pages deals with the child from two to six years of age and is written for mothers. Short chapters treat of the relation of the doctor, mother and nurse to the child, and the problems of the nursery, the physical development of the child, the bodily care, the clothes, food, sickness, daily routine, training and education. First aid suggestions are briefly mentioned.

F. C. N.

ABT'S PEDIATRICS. By Various Authors. Edited by Isaac A. Abt, M.D., Professor of Diseases of Children, Northwestern University Medical School, Chicago. Volume VI. Philadelphia and London. W. B. Saunders Company. Price \$10.00 per volume.

This latest volume of the series edited by Dr. Abt, deals largely with the infections, contagions and exanthematous diseases of childhood.

There is in addition a treatise on anesthesia, a chapter on peculiarities of surgery in childhood by Dean Lewis, and a brief consideration of fetal malformations by Richard Scammon, of the University of Minnesota.

Fortunately this volume went to press late enough to mention the recent studies in scarlet fever and the Dick toxin test and active immunization.

A feature of the entire series in this system is the comprehensive bibliography which is of great help to the student who has such a valuable reference work at his command.

F. C. N.

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies
Issued Monthly under direction of the Publication Committee

VOLUME XXII

OCTOBER, 1925

NUMBER 10

E. J. GOODWIN, M. D., EDITOR
901 Missouri Building, St. Louis, Mo.

PUBLICATION } W. H. BREUER, M.D., Chairman
COMMITTEE } C. B. FRANCISCO, M.D.
 } M. A. BLISS, M.D.

ORIGINAL ARTICLES

TRYPARSAMIDE THERAPY IN NEUROSYPHILIS

WITH REPORT OF CASES*

A. L. SKOOG, M.D.

KANSAS CITY, MO.

That syphilis occurs with great frequency in all modern civilized countries is known generally among laymen as well as physicians. The frequency of involvement of the central nervous system has not been appreciated quite so well. More than fifty per cent. of all patients inoculated with *spirocheta pallida* actually become neurosyphilitics of one type or another. A syphilitic leptomeningitis may be considered the earliest variety, or at least the first to be confirmed through our facility to obtain cerebrospinal fluid and the accurate, valuable tests possible on it. The central nervous system may be involved as early as four weeks following the appearance of the initial lesion.

The medical profession has never been satisfied with the numerous therapeutic agencies at hand to combat syphilis in general. This state of affairs is even more striking when we consider the treatment of neurosyphilis. Until recent years it has been considered that all of the various types of metasyphilis should be classed as incurable; and at the best only a small percentage might expect but a small amount of improvement. With such a state of affairs existing in the physician's mind, it is not surprising that there has been feverish activities among medical men and in chemical laboratories to discover some new method or more potent chemical to attack the causative agents of neurosyphilis. Many of these drugs have been developed with mercury or bismuth

as nucleus, but more frequently arsenic has been the base.

Tryparsamide as a therapeutic agent in neurosyphilis has attracted much attention during the past three years. The chemical is the sodium salt of N-phenylglycineamide-p-arsenic acid, which was first synthesized by Jacobs and Heidelberger¹ in 1915. This work was carried out in the Rockefeller Institute for Medical Research, and the preparation has continued under their control until during the past three months. Brown and Pearce² in the same laboratory carried out some careful studies on the spirocheticidal action of the drug. They announced that it was a highly destructive agent for the organism causing trypanosomiasis. At a later period clinical demonstrations on this disease were carried out in Africa by Pearce.³ Tryparsamide has been used with almost complete success in combating mal de caderas in Brazil by Smillie.⁴ Mal de caderas is a highly epidemic disease attacking horses and is known to be caused by a parasite belonging to the trypanosome group. Smillie used 8 to 10 grams intravenously in horses weighing 300 kilos; and a few doses changed the course from a uniformly fatal one to that of full restoration. Thus tryparsamide may be considered a perfect specific for trypanosomiasis and mal de caderas.

To Lorenz, Loevenhart, Bleckwenn and Hodges⁵ was assigned the task of first experimenting with tryparsamide in neurosyphilis. Especially did they have a large number of cases of general paralysis of the insane to treat in the Wisconsin institution. They place emphasis on the necessity of giving mercury at the same time. Moore, Robinson and Keidel,⁶ Lorenz, Loevenhart, Reitz and Eck,⁷ Schwab and Cady,⁸ Solomon and Viets,⁹ Kennedy and Davis,¹⁰ Kirby and Bunker,¹¹ Bluemel and Greig,¹² Ebaugh and Dickson,¹³ Wile and Wieder,¹⁴ and others have furnished enthusiastic reports during the past three years. Only a very few workers have been uncertain in their conclusions or results.

Tryparsamide is placed on the market in the form of fine, light, flaky, white granules,

NOTE. The opportunity for making this report has been made possible by tryparsamide being furnished for clinical experimentation by the Rockefeller Institute for Medical Research, the work to be conducted at the University of Kansas School of Medicine and Kansas City General Hospital.

*Read before the 68th Annual Meeting of the Missouri State Medical Association, Kansas City, May 5, 6, 7, 1925.

going into solution in cold water very readily. The arsenical content is about twenty per cent. yet a dosage of 3 grams usually is tolerated well in a man weighing 150 pounds. The therapeutic index of tryparsamide is about $\frac{1}{4}$ that of arsphenamine. The parasitocidal activity of the former is decidedly less than the latter, but its permeability for neural tissues is much greater. This fact probably explains its great value in metasyphilitic types. For years we have been taught that there is a comparatively poorer penetration for arsphenamine and mercurials in the central nervous system on account of the anatomy of its vascular system and the absence of lymphatics, and that the spirochetes become thoroughly entrenched among the nerve cells and fibers, glia and connective tissues.

Tryparsamide should be administered only by the intravenous route. The average dosage, ranging from 1.5 to 3 grams, should be dissolved in 10 to 20 cc. of cool, sterile, distilled water. The solution should never be warmer than the body temperature. We are advised that sterilization by heat is unnecessary and may damage the chemical. However, we should exercise the usual care in cleanliness in weighing and handling the preparation. Sterilized vessels, syringes, and needles only should be used. Its introduction into the vein is carried out exactly the same as for arsphenamine. Even larger doses than 3 grams have been given. From 6 to 20 doses constitute a series, each given at intervals of 5 to 7 days. In some cases bi-weekly injections may be made.

At first it was my policy to give tryparsamide alone, and thus more accurate evaluations could be made. However, many patients show greater improvement where mercurials are given at the same time. As a rule I prefer giving the mercury by deep muscular injections or inunctions. Iodides have also been given at the same time.

In selecting our cases for tryparsamide treatment we should use certain discretions. All workers are agreed upon the fact that it is of no value in the treatment of primary or secondary lesions. It is indicated in certain tertiary types involving the central nervous system, and some vascular lesions including in particular mesarteritis. Its chief value lies in the field of paresis, tabes and other closely related types of syphilis. Its ultimate value in syphilitic optic atrophy is to be determined after further experience.

Compared with arsphenamine and neoarsphenamine, it is more readily prepared and better tolerated. Acute or immediate toxic effects are less frequently encountered. I have seen but one case of arsenical dermatitis fol-

lowing its use. The patient in which this occurred has had during the past year two previous attacks of acute arsenical dermatitis following the use of arsphenamine intravenously. On two different occasions more recently this patient failed to tolerate tryparsamide. The dermatitis was quite severe after each attempt.

One danger about which many have issued warning, is the possible development of an optic neuritis and optic atrophy following its continued use. This is not surprising in that tryparsamide is a much closer relative of atoxyl than is arsphenamine. It may be recalled that a number of years ago there was much discussion about optic atrophy occurring when atoxyl was employed. Therefore its use has been discontinued. A careful ophthalmological examination for every case is indicated before starting the use of this new preparation. Especially should we be on the guard for the earliest manifestation of an optic atrophy or retinal inflammation. However, I do believe that it may be given cautiously even in some cases with beginning optic atrophy. We should remember that optic atrophy occurs frequently in late types of syphilis, and that it might appear whether tryparsamide was used or some other drug given or no specific treatment employed.

In an analysis of the literature bearing upon tryparsamide therapy no real objectors can be cited. However, there are some differences as to percentages of restoration, improvement, negative results obtained, complications and deaths. I have reviewed some 28 articles bearing on the subject of tryparsamide which have appeared during the last three years. In this discussion only a few bibliographic references will be furnished.

Especially are the results attractive for the cases of paresis reported. However, the paretic should have the treatment begun before too much neuronal degeneration has appeared in the frontal and parietal lobes and the association pathways contained therein. Many cases which seemed hopeless have been given a trial with tryparsamide and surprisingly good results obtained. I wish to give an abstracted report of a few of my cases as follows:

REPORT OF CASES

Case M. Paresis with optic nerve trouble. Male, age 29. He had a primary lesion 6 years ago. A series of "shots" was given and the patient dismissed as cured. At the time he entered the Bell Memorial Hospital he had a marked impairment of memory, poor gait, some occipital and frontal headaches, some parasthesias and a typical paretic speech. He had lost 15 pounds in one year. He was extremely irritable, and was unable to work. He was definitely euphoric. The pupils gave sluggish

responses. Some neuroretinitis was present, left more than right. The tongue protruded to the left. Coarse fibrillary tremors were present in the tongue and face. Patellar reflexes were exaggerated, left greater than right. Some bilateral dysidiadochocinesia was present. A positive Romberg was obtained. Blood and spinal fluid Wassermanns gave positive findings. A lymphocyte count of 104 in the spinal fluid was made. The gold chloride read 455,310,000. Despite a beginning optic nerve disturbance tryparsamide therapy was pushed with brilliant results. Sixteen intravenous tryparsamide treatments, each consisting of 2 to 3 grams, were given at two separate times, during April and May and in October, 1924. The patient remains in good health and has been able to follow his occupation as a coal miner during most of the time. His mentality was fully restored. His spinal fluid lymphocyte count was reduced from 104 to 10. The Wassermann and Pandy were changed to negative.

Case F. M. Paresis. This represents another case of paresis with brilliant results. The man was 45 years old, had a primary lesion 26 years ago, had marked mental symptoms with impaired memory, and a definite parietic speech. He had had much iodides, mercurials, and arsphenamine treatment. The spinal fluid gave a 4 plus Wassermann, a lymphocyte count of 8, a positive Pandy, and an increased pressure. The goldsol read 555,533,100. During September and October, 1924, fourteen tryparsamide treatments ranging from 2 to 3 grams were given. The serological changes consisted of a reduced Pandy, a cell count of 4, and a goldsol reading of 112,332,110. After two months the patient returned home and continuously has been operating a filling station quite successfully.

Case H. W. Late Paresis. A man 30 years old, had had a primary lesion at the age of 18. There had been a steady mental decline covering a period of about 2 years. All of the mental faculties were greatly impaired. He was unable to conduct his business. The patient had a parietic speech, and alternating periods of mania and depression. All deep reflexes were greatly increased. The patient was extremely emaciated. He became bed-ridden, a soiler, and developed bed-sores. Tryparsamide treatments were begun in June, doses ranging from 2 to 2.5 grams. Eighteen intravenous treatments were given. The patient gradually improved, until at the present time he is cleanly and can care for himself. More improvement is anticipated. His serology has shown a definite improvement.

Case D. S. Meningovascular type. Female, age 39. Onset 3 years ago with neural irritability. She became extremely irritable, "nervous," asthenic, had some headaches, insomnia and much loss of weight. A 4 plus Wassermann was obtained several times. The spinal fluid was positive for cerebrospinal syphilis, with a pleocytosis. The husband and three children have had positive Wassermanns, clinical signs of syphilis of the nervous system, and have had much treatment. The patient had not responded well to arsphenamine, mercurials and iodides. A good clinical restoration followed the use of 22 tryparsamide injections, dosage ranging from 1.5 to 2 grams. She is sleeping well, gained much weight, and doing her household work readily.

Case C. P. Tabes with crises. Female, age 47. First symptoms appeared 3 years ago. She presented a marked Romberg, Argyll-Robertson pupils, loss of patellar and Achilles reflexes, greatly reduced deep muscle sense in the lower extremities and much loss in weight. For one year she suffered greatly with

gastric and abdominal crises. The spinal fluid was under increased pressure, gave a 4 plus Wassermann, a 2 plus Pandy, a cell count of 43 lymphocytes, and a goldsol reading 455,532,000. Fourteen injections of tryparsamide, dosage ranging from 1 to 3 grams, were given over a period of 6 months. Mercury salicylate, potassium iodide, flumerin and spinal drainage have been used during this time at different periods. The patient has improved much. The gastric crises practically have disappeared. The serology shows a marked improvement, but a 4 plus Wassermann continues.

Case P. C. Tabes with gastric crises and a mild beginning optic atrophy. Male, age 37. Present illness began 7 years ago. He had a positive Romberg, Argyll-Robertson pupils, absence of patellar and Achilles reflexes, a left ptosis, and a persistent, vicious type of gastric crises. His spinal fluid showed a moderately increased pressure, a 4 plus Wassermann, 1 plus Pandy, a cell count of 5 lymphocytes, and a goldsol reading 554,432,100. After 3 months of treatment, consisting of 11 tryparsamide injections and 12 flumerin intravenous treatments, a definite clinical improvement is noticed. The last spinal puncture showed the fluid under some increased pressure, anti-complimentary Wassermann report, a 2 plus Pandy, a cell count of 6 and goldsol reading 1,222,321,000. The gastric crises have disappeared.

Case W. Tabo-paresis. A middle aged business man. A cancer appeared 10 years ago. The illness appeared gradually 18 months ago with a psychomotor restlessness, grandiose ideas, impaired memory and speech, fibrillary tremors, and depressed spells. The pupils were irregular and irresponsive to light. All of his upper deep reflexes were exaggerated and patellars and Achilles absent. Coordination was impaired. A mild positive Romberg was present. The spinal puncture showed an increased pressure, a pleocytosis, a 2 plus Pandy, a 4 plus Wassermann, and a goldsol reading 55,555,544,320.

For many years this patient has suffered from a chronic skin trouble varying in degree and diagnosed as ichthyosis. During the early part of his illness some 8 intravenous arsphenamine injections produced finally a toxic dermatitis. Two or three months were required for recovery from this added skin trouble.

In December, 1924, four intravenous tryparsamide injections were employed, dosage ranging from 2.5 to 3 grams each. The treatment was stopped on account of the development of an arsenical dermatitis which required 6 weeks for a recovery. Again in March, 1925, 1.5 grams of tryparsamide was given. A dermatitis promptly appeared again, requiring 3 weeks for a restoration. Now the patient's cerebration, memory and conduct is not far from normal. An improvement had begun under arsphenamine and mercurial treatment, but a more rapid progress was established after the tryparsamide treatments were commenced.

The cases briefly reported illustrate five different varieties of neurosyphilis. It will be noted that the parietic group furnish more striking and rapid results. I find that those with posterior column degenerations, especially when far advanced, do not yield as good results as cases of paresis. The results at times are striking in cases of meningo-vascular neurosyphilis.

A few of my cases have had already a beginning optic atrophy or retinal changes. I would be cautious in selecting a case of optic atrophy for tryparsamide therapy and, if given the drug, extra precautions and closer observation should be employed.

The above seven cases reported briefly have been selected from 50 cases in which tryparsamide treatment was started. For several no conclusions whatsoever can be drawn because for one reason or another treatment was stopped too early. In considering the whole group we may select 30 cases which have been studied adequately, given enough treatments to draw conclusions, and followed up sufficiently. The results were fine in 7, the patient being changed from a state of incapacity on account of mental or somatic conditions to one capable of performing his former duties in a large part or entirely. Nineteen showed a considerable amount of improvement. No improvement could be noted in 3. There was a death in one case only, and this prognosis had been rendered before treatment was started. In no way could the tryparsamide be suspected as a factor in causing the death. No optic atrophy or blindness could be ascribed to the tryparsamide treatment in any of my 50 cases.

Cases M., M. F., W. H. and W. represent the paretic group. One had in addition a beginning optic atrophy and another had very definite evidence of an additional posterior column degeneration. Syphilis was contracted in each case respectively six, ten, twelve and twenty-six years before the earliest paretic manifestations. I appreciate that before a critical neuro-psychiatric group of professional men, the question might arise as to whether these patients could be classified as paresis with certainty. Two were in their earlier stages, but had several certain definite signs of the disease. Two were in such a late stage that there was no doubt. Both of the tabes cases had unusually severe gastric crises which had been present for a long period. The physicians who have had much experience in the treatment of tabes dorsalis will appreciate fully the difficulties in handling gastric crises. Case D. S., with the meningo-vascular type, had had all kinds of treatment prior to the time she appealed to me for treatment. Tryparsamide produced quicker and better results than she had experienced in any other course of treatment. Case W. is of particular interest in illustrating that an arsenical dermatitis may happen where tryparsamide is used, much the same as with other arsenical preparations.

CONCLUSIONS

1. Tryparsamide is a valuable addition to

our therapeutic armamentarium for the treatment of all forms of late neurosyphilis, but of the greatest value in our battle against paresis. However, we should not rely upon this preparation alone. There are many things to be considered in the handling and treatment of the various types of syphilis of the central nervous system.

2. An arrested case of paresis may be considered as a restoration from a practical point of view.

3. The stability of tryparsamide and the simplicity of its preparation for administration should appeal to the average physician.

4. Untoward effects which might be attributed directly to this chemical occur less frequently compared with most other arsenical preparations. The optic nerve and retina should be examined or observed by a competent examiner or ophthalmologist before starting the treatment and during the course.

5. Further time, possibly five or ten years, will be required before tryparsamide can be valued properly. We will be interested in following up the chronological sequences of these patients for many years following their treatments.

6. Tryparsamide, having gone through a successful clinical experience of more than three years, certainly is worthy of an extended and more intensive trial.

1311-1316 Rialto Building.

BIBLIOGRAPHY

1. Jacobs and Heidelberg. J. Am. Chem. Soc. 41: 1581, 1917.
2. J. Exper. Med. 30: 411, Nov., 1919.
3. Brown and Pearce. J. Exper. Med. 30: 417, 437, 455, 483, Nov., 1919.
4. J. A. M. A. 82: 5, Jan. 5, 1924.
5. Pearce. J. Exper. Med. 34, Supplement 1, Dec. 1, 1921.
6. Smillie. J. Am. Vet. Med. Assoc.: 19, Sept., 1923.
7. Lorenz, Loevenhart, Bleckwenn and Hodges: J. A. M. A. 80: 1497, May 26, 1923.
8. Moore, Robinson and Keidel. J. A. M. A. 82: 528, Feb. 16, 1924.
9. Lorenz, Loevenhart, Reitz and Eck. Am. J. Med. Sci. 168: 157, Aug., 1924.
10. Schwab and Cady. Arch. Neurol. and Psych. 13: 80, Jan., 1925.
11. Solomon and Viets. J. A. M. A. 83: 891, Sept. 20, 1924.
12. Kennedy and Davis. Arch. Neurol. and Psych. 13: 86, Jan., 1925.
13. Kirby and Bunker. J. Nerv. and Ment. Dis. 60: 51, July, 1924.
14. Bluemel and Greig. Col. Med. 22: 16, Jan., 1925.
15. Ebaugh and Dickson. J. A. M. A. 83: 803, Sept. 13, 1924.
16. Wile and Wieder. J. A. M. A. 83: 1824, Dec. 6, 1924.

HEMOCHROMATOSIS

WITH REPORT OF A CASE*

D. F. MANNING, M.D.,

MARSHALL, MO.

Hemochromatosis, first described by Von Recklinghausen in 1889, is a disease of interest

*Since the preparation of this paper Wilson and Weiser, of Detroit, have reported a case. Journal American Medical Association, March 14, 1925.

because of its striking pathological and clinical manifestations as well as its rarity.

Its chief characteristics are: (1) a peculiar bluish or ashen gray bronzing of the skin due to the deposit of hemosiderin, an iron-bearing pigment, which is also present in massive amounts in various viscera and tissues of the body; (2) hypertrophic and cirrhotic changes in the liver; (3) enlargement of the spleen; (4) fibrosis of the pancreas, with, in the later stages, hyperglycemia and glycosuria—the so-called bronze diabetes of the French. It occurs almost exclusively in men in the middle period of life, only one authentic case having been reported in a woman.

An idea of the infrequency of the disease is evidenced by the fact that only eighty-three cases have thus far been reported.* In the clinical records of over 100,000 admission to the Johns Hopkins Hospital, Fletcher¹ found but three instances of hemochromatosis and a like paucity of cases is seen in the records of all large hospitals and clinics.

Judging from the bibliography of the literature, it would appear that the disease is of about equal frequency in this and European countries.

As to the etiology, there is a rather wide variation of opinion. Some hold that it is due to a primary dyscrasia of the blood, causing the red corpuscles to part with their hemoglobin and thus the iron pigment finds its way in uneven distribution in the skin and organs of the body; others, to abnormalities of individual cells, particularly in their chromogenic activities in the process of metabolism; a few, to the idea of a faulty function of the liver cells in their autolytic properties; and still others, to a primary cirrhosis of the liver with secondary changes of a fibrotic type in the pancreas. All views are more or less hypothetical, but the latter—that of primary changes in the liver—appeals to me as the most tenable and nearest in line with the clinical course of the disease.

Certainly no striking or uniform blood changes have been noted in any considerable number of cases, although Von Recklinghausen believed that the causative factor was in a primary destruction of the red cells. But later investigations seem fully to refute this view.

Studies in metabolism have been made by Gaskell and his co-workers,² McClure³ and other competent observers, but with no definite information gained further than to demonstrate that there is an increased amount of iron in the blood and that its elimination is defective both as to time and the ultimate amount recovered.

Based on experiments with livers of rabbits after having treated the animals in such way as to produce conditions similar to those found in hemochromatosis, Sprunt and others⁴ believe that dysfunction of the liver cells in the catabolic process in autolysis may explain the cause of the malady. After having removed all hemoglobin from the specimens they still found iron-bearing pigments in the cells in very large quantities. But this does not seem conclusive as an etiological factor. Rather it appears as only a part of the general pathology as yet not wholly explained. Not only is there retention of iron, but the quantity found by suitable chemical methods of estimation proves that the amount present can in no way be accounted for, as it has been shown that in the liver more than a hundred times as much iron has been found as is in the whole body under normal conditions. Asserting that food is the sole source of iron, and the daily quantity thus ingested only about thirty milligrams, Muir and Dunn, as recorded by McPhedran in Tice's "Practice of Medicine," estimate that if the total amount were retained it would require three years to accumulate as much as is stored in the liver alone.

Supported by evidence gained from cases seen in the early stages of the disease as recorded by several observers, but mainly by the clinical course of the case herein reported, it is my opinion that the primary cause lies in the changes in the liver. The animal experimentation of Rous and Oliver⁵ coupled with their findings in a patient seen in the early stage of the disease, lends convincing weight to this view, in that the initial pathological change appeared to be a well defined cirrhosis beginning in this organ. And furthermore, practically all cases of hemochromatosis give histories of over-indulgence in alcoholic drinks; and the abuse of alcohol is an accepted element in the causation of the ordinary types of portal cirrhosis.

But even so, much is lacking in any view we may adopt and no hypothesis thus far advanced fully accounts for all of the pathological and clinical features that combine to form the picture of this peculiar disease. Just why in this type of cirrhosis there should be such amounts of iron-containing pigment and little or none in the usual forms is not as yet susceptible of interpretation.

As to the diabetic element, while it may not properly be said to be a terminal phenomenon, it certainly is a late development in the clinical course of the disease and may be explained as a secondary feature due to a low grade endarteritis in the pancreas, resulting in dysfunction leading to the hyperglycemia and

later the spilling over of sugar in the urine. Some cases go through the entire course, however, without developing any evidence of diabetes. And for these reasons it would seem that the French designation—*diabète bronzé*—is misleading. It begins at the wrong end of the chain.

If we exclude Addison's disease and argyria in our differentiation there should be no great difficulty in diagnosing the disease. In Addison's disease, the pigmentation of the skin is more uniform than in hemochromatosis, and also the mucosae partake in the discoloration; the liver and spleen are not enlarged, nor is there glycosuria. In many respects, however, the appearance of the skin is not unlike that of argyria, but the history, with the clinical course and pathological findings will separate the two conditions easily.

CASE REPORT

N. R. W., male, age 47, broom maker. Duration of disease about twenty-one months.

Family history. Father and mother lived to advanced ages, 86 and 84, and both died of pneumonia. Four brothers and three sisters, all living and in good health.

Past history and habits. Except for diphtheria when 14 years of age and pneumonia 9 years ago his health had always been good. For 20 years he drank heavily at times, twice or three times a year going on a "spree" for ten days to two weeks. In the intervals he was a total abstainer. He denied ever having had any venereal disease.

Present illness. In October, 1922, he went on a two weeks fishing expedition. During that period he drank about one pint of "corn whisky" daily. About a month thereafter he became rather deeply jaundiced, the jaundice lasting in variable degrees for several weeks. He did not feel badly, however, and had little or no digestive disturbance during the time; but his bowels were rather obstinately constipated, a condition he had not experienced before. Six months later a feeling of discomfort in the upper abdomen, "a heaviness or weight," as he expressed it, developed, with a noticeable decline in strength, particularly in the legs. It was at this time that he first came under my observation.

On examination it was evident that the skin on his face and hands was abnormally dark, being of a bluish-gray color, shading to a dark tan, and was dry and somewhat scaly. The liver was distinctly enlarged but smooth and extended well below the costal border. The spleen was not palpable and percussion revealed no enlargement. The heart and lungs were normal, as also were the superficial and deep reflexes. The blood pressure was, systolic 112, diastolic 82. The urine was negative for both albumin and sugar, with specific gravity of 1024. The blood picture was: red cells 4,600,000, whites 7,200, hemoglobin 90 per cent., with the differential counts showing no change in the relative percentages. The blood Wassermann was negative.

Gradually his weakness increased, drowsiness developed and he would go to sleep almost immediately when not at work or moving about; the pigmentation of the skin deepened and increased in area; the liver progressively enlarged and by the end of the first year of illness the spleen showed

distinct hypertrophy, and free fluid was present in the abdominal cavity. Constipation persisted, but occasionally there were attacks of looseness of the bowels with straining and the passage of bloody mucous stools, with painful hemorrhoidal congestion, due no doubt to obstruction in the portal circulation.

Not until about three and a half months prior to the end was there any evidence of glycosuria. He entered the hospital May 17, 1924, and was bedfast practically all the time from this date to the time of death, July 19, 1924.

Blood sugar estimation at the time of his entrance to the hospital, and about one month after the development of the glycosuria, showed 185 milligrams of sugar to the 100 c.c. of blood. Urinalysis at the same time gave a specific gravity of 1040, with 5 per cent. of sugar by the Benedict quantitative test.

Autopsy. Body emaciated; skin everywhere darker than normal with the face, arms, hands, genitalia and the tibial surfaces of the legs, uniformly and deeply bronzed. The abdomen contained a moderate amount of free fluid. The liver was greatly enlarged, dark-brownish-red in color, coarsely granular and decidedly resistant to the knife. The spleen was about twice the normal size, smooth, dark brown in color, but less fibrotic than the liver. The pancreas was larger and longer than normal, no noticeable change in color, but the head of the organ was distinctly fibrotic. The left kidney was about twice the size of the right, but aside from this there was nothing abnormal in the appearance of either. The stomach and intestines were normal, except that along the upper division of the duodenum patches of pigment were evident. The abdominal lymph nodes were enlarged, particularly about the hilus of the liver. The thorax was not opened.

Microscopical report. Cuttings from the liver, spleen, pancreas, kidneys, and skin were submitted to Dr. Frank J. Hall for examination. He says: "This is a typical case of so-called bronze diabetes, and all the cuttings sent show the deposit of a very large amount of fibrous tissue—in the liver producing a perlobular or portal cirrhosis—and deposits of iron granules in the cells and connective tissue septa. The pigmentation in the skin is due to a deposit of iron granules in the connective tissue cells known as chromatophores, in that particular resembling pigmented sarcoma.

The diabetes is purely a result of fibrosis of the pancreatic glands themselves, but also resulting in the obliteration of the islands of Langerhans. In the spleen, the connective tissue process appears to begin in the capsule and extends downward involving the splenic sinuses, resulting in the dilatation of the blood vessels and the replacement of the splenic pulp by hyperplastic tissue."

Dr. Hall prepared a series of sections which show very graphically the connective tissue changes and the deposits of iron granules in the cells and tissues involved.

COMMENT

The relation of this disease to cirrhosis of the liver is quite striking, and were it not for the massive and widespread deposits of iron pigment, might well be considered as an ordinary hypertrophic cirrhosis of the liver, with secondary changes of like nature in the spleen and pancreas. But the pigmentation sets it apart as a separate disease entity of peculiar

interest that calls for an explanation of the distinctive underlying cause which is as yet not satisfactorily solved.

A small percentage of cases of uncomplicated cirrhosis of the liver show deposits of iron pigment in the hepatic cells and interstices. Osler makes mention of this fact and Blanton and Healy⁶ report four such cases in the Bellevue Hospital records, but with no change in spleen or pancreas; nor were deposits of pigment found elsewhere than in the liver.

The pathology of hemochromatosis is well defined, but the etiology, and more particularly the cause of the excess elaboration of iron pigment, is shrouded in uncertainty. Altogether it appears to be more or less of a clinical curiosity of very rare occurrence.

REFERENCES

1. Fitcher. *Amer. Jour. Med. Sc.* 133: 78, 1907.
2. Gaskell, et al. *Quar. Jour. Med.* 7:129, 1913.
3. McClure. *Arch. Int. Med.* 22:610, Nov., 1918.
4. Sprunt, Colwell and Hagan. *Jour. Exp. Med.* 16:607, 1912.
5. Rous and Oliver. *Jour. Exp. Med.* 28:645, 1918.
6. Blanton and Healy. *Arch. Int. Med.* 27:406, 1921.

THE INGUINAL HERNIA*

ROSS A. WOOLSEY, M.D.

ST. LOUIS

The term rupture is objectionable since it implies an opinion as to the mode of formation of the ailment which has long since been proven erroneous.

Hernia is the sequel of a congenital defect often made apparent by effort. Its protrusion through the abdominal wall is quite gradual and has existed there for a long time, easily recognized by one accustomed to such examinations. However, the patient's attention is usually drawn to it by an accidental circumstance in which the intra-abdominal tension is increased resulting in pain. The existence of double hernia is incompatible with the idea of a hernia of force.

A most comprehensive review of the subject is a contribution by Wainwright¹ from which I have freely borrowed.

Berger states that all persons the subject of hernia attribute it to an accident, most often to effort. The profession has not impressed upon the laity the knowledge developed by hernia operations.

Twenty-five years ago Russell² discussed the persistent processus vaginalis and concluded that an oblique inguinal hernia never occurs at any age independently of the presence of a congenital sac. He states that a normal inguinal canal is fortified against the occurrence of her-

nia to a perfection and degree of strength in extravagant excess of any demand that can be made upon it.

Murray³ agreed with Russell as to the congenital origin of the so-called acquired hernia, backing his opinion with 200 unselected adult dissections in which he found 47 unobliterated sacs.

Colcord⁴ has well said that hernia first complained of by the patient after an accident or a heavy lift does not prove the accident caused the hernia. It discovers it to the patient if honest; or if dishonest, it affords him an opportunity to sell an old hernia to his employer.

Coley-Leigh-Walker-Hopkins-Hutchison⁵ have constituted a commission on traumatic hernia for the surgical section of the American Railway Association. They conclude that hernia is never the result of a single trauma but that it must be cumulative over a long period of time; that the all important cause is the preformed sac of peritoneum and should be considered a disease, due to special anatomical weakness.

Brown⁶ reports the case of a jockey whose horse fell on him. He became immediately ill with severe pain, vomiting and collapse. A few minutes later a typical small strangulated hernia was found and reduced by taxis. There was no previous history of hernia, yet subsequent operation showed a small sac containing omentum.

It is now generally conceded by students of the subject that traumatic hernia can only be caused by direct violence producing rupture of the muscle wall followed by protrusion of the viscera at the same point.

There is often a time in the history of hernia when even a surgeon cannot determine its presence. I have in mind a patient presenting himself for hernia operation, stating that he had not been working for a number of days and that the hernia had not appeared during his idleness. Examination with the finger in the canal and against the abdominal ring, which was small, failed to elicit any impulse on coughing or straining, or both. There was, however, a distinct impulse felt with the cord between the fingers which is never found except in the presence of an unobliterated peritoneal sac. This, by the way, is an infallible diagnostic sign of extreme value which, as far as I know, has never been published. The impulse is expansile in character, due to the direct connection of the cavity of the processus vaginalis with the peritoneal cavity. It is not found in the absence of the sac since the cord alone is entirely extraperitoneal. The patient was put on his back on the floor with his feet under the radiator and directed to raise his body slowly to the perpendicular and then slowly back to

*Read before the 68th Annual Meeting of the Missouri State Medical Association, Kansas City, May 5, 6, 7, 1925.

the floor for a number of times, at the end of which exercise his hernia presented. Operation followed, showing a thin unobliterated sac extending into the scrotum.

Operative findings frequently demonstrate whether the hernia is recent or old. The small, thin empty sac is not necessarily a recent one, nor does its length indicate other than the extent of its obliterative process. It requires the presence of hernial contents to produce the thickening usually associated with old hernia.

Speculation on the etiology of hernia must include the preformed sac and the weak posterior wall of the canal. However, most men with preformed sacs do not develop hernia, as is evidenced by Murray's dissections in which he demonstrated a sac in 23.5 per cent. of his unselected cases. The suggestion of posture as a factor in the cause of hernia in man is not well founded since it is most commonly found in infancy.

We owe an everlasting debt of gratitude to Bassini who, in 1889, gave to the profession an operation that could be classed as a radical cure. Removal of the sac, which up to this time had not been attempted, was the keynote to his success.

Andrews, describing Bassini's operation from personal observation, stated that his first row of sutures included the whole of the posterior wall except the peritoneum, emphasizing the point that the conjoined tendon was the important structure to be used in closing to fortify against recurrence. Bassini's vision recognized the weak posterior wall, repair of which necessitated transplantation of the cord.

Ferguson first severely criticized Bassini's transplantation. Later, Pitzman⁷ gave testimony that the inguinal canal should be anatomically restored.

We admit that the human anatomy is a wonderful mechanism. However, we claim that anatomical defect in the posterior wall is necessary to hernia. If that be true and the posterior wall and the value of sphincteric mechanism can be strengthened by changing the course of the canal we recommend it.

Andrews⁸ modifies Bassini's operation in that he retracts the internal oblique and transversalis muscle suturing the transversalis fascia to Poupart's ligament. We believe that this is inadequate since the fascia is normally thin medially to the iliac vessels and must be anatomically defective laterally else hernia would not have developed.

The fact that many hard working individuals who, in pursuit of their labors produce great pressure against the inguinal region, have large abdominal rings and do not develop hernia, leads one to believe that Pitzman's lessening of the caliber of the abdominal ring in his pos-

terior wall repair is insufficient. Since our experiences show that the defective posterior canal wall is responsible for inguinal hernia we have long since developed and followed a procedure which has proven exceedingly satisfactory.

We believe that the inclusion of muscles in hernia suture is not warranted. The ease with which the external oblique aponeurosis is stripped from the internal oblique muscle should be proof enough that muscle tissue will not permanently attach itself to fibrous tissue.

Operation. The skin, superficial fat and fascia are incised from above the abdominal ring to below the superficial ring, extending directly over the canal. By gauze dissection it is stripped from the external oblique aponeurosis. The superficial ring is cut with blunt scissors on its medial side and the aponeurosis slit to above the abdominal ring and separated from the deeper structure laterally to a good exposure of Poupart's ligament and medially to a good exposure of the rectus sheath. The cord is next lifted from the floor of the canal close to the spine of the pubis. The entire contents of the canal are lifted and dissected from its floor upward and outward to the abdominal ring. The hernia sac is next found and opened. A finger is inserted in the sac as a guide when it is separated from the surrounding structures by gauze dissection. After it is free from the ring it is transfixed, ligated and excised. We use mattress suture only when the neck is too large to admit of tying *en masse*. The internal oblique and transversalis muscles are retracted upward. The cord is retracted inward and we are ready for the first row of sutures.

Believing that the posterior wall is stretchy and unstable in its entire length it is not disturbed but is re-enforced in the following manner with No. 1 twenty day catgut. The rectus sheath is sutured to Poupart's ligament as close as possible to the pubic spine by a stitch so placed as to leave the knot external to the fascia. This suture starts from without inward through the fascia lata just below Poupart's ligament, grasps the rectus sheath, returns from within outward through or just about Poupart's ligament where it is tied externally to the ligament. Each interrupted suture is placed after the same manner, one-half inch apart; the first three or four sutures include the rectus sheath lateral to which the aponeurosis of the combined internal oblique and transversalis is used in its stead, the suture line extending far enough to close abdominal ring to proper size. With the patient in a jack-knife position there is no tension on any of these sutures.

The lateral flap of external oblique aponeurosis is carried medially as far as possible and sutured to the deep side of the medial flap with

a suture exactly similar to the first row, leaving the knots external to the fascia. The medial flap is now carried laterally and sutured either to Poupart's ligament or to the fascia lata. A niche is made in the border of each flap on a level with the abdominal ring to prevent constriction of the cord which is placed in its new bed above the imbricated external oblique aponeurosis. The skin, superficial fat and fascia are sutured with interrupted silk worm gut sutures about one inch apart, the needle entering the skin one-half inch from the margin and extending straight through fat and fascia. The friction or surgeon's knot of three turns is used to prevent puckering, to secure proper approximation of the skin and insure a flat, comfortable knot.

I believe that this method gives us an ideal posterior wall; that the arching of the internal oblique and transversalis above the abdominal ring gives us a perfect valve or sphincter and that the external ring which has been destroyed plays no part in the formation of hernia.

Our experience with reference to recurrence warrants our belief that the procedure is eminently satisfactory. The fact that we have for many years been connected with the hospital department of a large railway where hernia is especially common and where the patient can return for operation of recurrence without expense leads us to believe that we would see more of our failures than the majority of surgeons.

Frisco Railway Hospital.

REFERENCES

1. Archives of Surgery 1923
2. Lancet 1900
3. British Medical Journal 1907
4. International Journal of Surg. 1919
5. Annals of Surgery 1922
6. Annals of Surgery 1904
7. Annals of Surgery 1921
8. Annals of Surgery 1924

DISCUSSION

DR. KERWIN W. KINARD, Kansas City: It seems to me that one of the most important factors necessary to affect a cure for hernia at operation is the tying off of the sac. In incomplete indirect inguinal hernias the sac is easily found on the under inner surface of the cord (depending upon its size) and opened contents may be easily pushed back into the abdomen; the sac, when small, is dissected by clean sharp dissection from the cord to an area well above the internal ring. Here the peritoneum may be transfixed with chromic sutures and the excess sac cut away leaving a fair stump. This stump may be buried beneath the transversalis muscle and sutured to it. This would probably cure the hernia, if properly done, even if the unfinished hernioplasty were not done very well, provided the patient remained in bed for ten or twelve days. This type of case is simple.

But often in old hernias of years duration, with adhesions between the hernial sac and the tunica on the outside as well as between the omentum or intestines and the sac on the inside, it is a more difficult procedure. In such cases the sac may be opened

fairly high, then, with the index finger to the bottom of the sac, the opening is continued toward the bottom of the sac until adhesions have been freed and the contents of the hernial sac have been put back into the abdomen. Often the sac is so thick and adherent that it is better not to attempt dissecting it off of the cord. In such cases we cut away the excess of sac and stitch the edges of the sac to the cord leaving the secreting surface of the sac exposed. The sac is then liberated near the internal ring and pulled out sufficiently to treat, as in the case of the immature hernia, by transfixion of the stump and excision of the redundant portion. This allows the stereotyped hernioplasty to follow and ultimate cure. This avoids traumatism to the cord and in healing no added delay to convalescence.

CHANGES IN THE CHEST WALL IN TUBERCULOSIS*

W. A. GERMAN, M.D.

KANSAS CITY, MO.

The problem of the changes occurring in the skin and musculature of the chest wall in pulmonary tuberculosis has given rise to a diversity of opinion among diagnosticians. Since the work of MacKenzie on the reflex manifestations in the skin and muscles in diseases of the heart, the literature has become voluminous with regard to similar reflexes from both intra-abdominal and intra-thoracic pathology. Pottinger has investigated the reflex manifestations in visceral disease. Likewise, many investigators have written their opinions pro and con. It was this diversity of opinion that led us to investigate the chest walls of fifty cases of known pulmonary tuberculosis.

For a great many years the fact has been accepted that there is a visceromotor reflex manifested in affections of the viscera. This visceromotor reflex affects the muscles somewhere in the region of the disease. It has been established beyond question that this reflex is brought about by a stimulus from a viscus passing into the spinal cord. The stimulus excites the cells of the motor nerve with the result that there is contraction of the muscle supplied by this nerve. Sir William MacKenzie has stated that when a portion of the spinal cord becomes violently stimulated by reason of a visceral affection, that portion of the cord may remain for a length of time in an over-excitable state and that all the nerves that arise from this portion of the cord may be much more easily stimulated. This can be demonstrated by the exaggerated motor reflex that may be produced by light pinching between the thumb and finger, of such weak force that normally it would only result in the sensation of touch, and yet produces very readily a strong

*Read before the 68th Annual Meeting of the Missouri State Medical Association, Kansas City, May 5, 6, 7, 1925.

reflex contraction of the muscles whose nerves arise from the same portion of the cord. The nerve supply to the abdominal viscera has been found to be the terminal branches of the vagi and the many plexuses of the sympathetic system. When a visceral organ is diseased and by this pathological condition causes a stimulation of its nerve supply, it results, among many other signs, in hyper-contraction of the overlying muscles. This contraction is frequently spoken of as rigidity. This condition has been accepted as a fact. It would only be reasonable to expect that active pathological affections in other visceral organs which have a similar enervation would result in similar visceromotor reflexes through the spinal cord to the muscles supplied by that portion of the cord.

The lungs have been found by embryologists to develop from a diverticulum from the gastrointestinal tract. Therefore, enervation of the lungs would be similar to that of the intestinal canal, namely, from the vagi and the sympathetic nervous system. The balance between the inhibitory action of the vagi and the excitatory action of the sympathetics in the lungs, acts in like manner as is found in the gastrointestinal tract. Stimulation of the vagi in the lungs gives rise to many symptoms, among the most prominent of which may be mentioned cough, unnatural sensations in the larynx often spoken of as tickling, slow pulse, nausea and vomiting, and possibly vasomotor disturbances, resulting in flushing or anemia. Many of these symptoms are partially neutralized by the opposite action of the sympathetic nervous system. The sympathetic nerve supply of the lungs joins the ganglia of the posterior roots of the upper cervical nerve and communicates with the motor nerves by way of the ganglia.

Extensive experimental and research work carried on by many investigators, among whom MacKenzie's and Pottenger's works deserve especial attention, has rather conclusively proven that pathological conditions in the lungs and heart very frequently cause a motor reflex in the muscles of the chest wall. This reflex, resulting in contraction of muscles of the chest wall, acts in the same manner as pathological conditions in the abdomen result in a rigid abdominal wall.

The fact that over-stimulation of a specific muscle or group of muscles by constant stimulation will result in fatigue of the muscle or group of muscles, has been proven. If this stimulation is carried on for an extended period of time there will result a weakened condition of the muscles and later, atrophy. Pulmonary tuberculosis is essentially a chronic disease and its chronicity affords a chronic stimulation in the lungs. This fact led us to investigate the condition of the muscles of the chest wall where

there was an unquestioned pathological irritation of the lungs due to pulmonary tuberculosis. These cases ranged from incipient to far advanced tuberculosis and the findings were recorded upon each case as it came under our observation, with no attempt at selection of cases being made.

Six of these fifty cases presented an appreciable change in the tonus of the pectoral muscles and the upper border of the trapezius on the right side. Two of these cases presented a visible difference in the sternomastoid muscle with increased tonus over that of the corresponding muscle on the left. These six cases were positive for tuberculosis of the right apex as evidenced by further physical findings, by X-ray or by laboratory examination. In twelve cases there were found to be changes in the tonus of the trapezius, scaleni, pectorals, and rhomboids on both sides with definite changes in the sternomastoids on the right, in eight cases, and questionable changes in four others. These cases showed tuberculous invasion in the upper lobe of both lungs.

In twenty-one cases there was definite atrophy of all muscles over the upper chest wall. Nine of these cases on inspection showed the left chest wall more markedly atrophic, while in twelve there was visible evidence of more atrophic changes over the right chest. In all these cases the muscles over the upper thorax and neck were taut. Four of this group presented marked atrophy of muscles with definitely increased tonus.

Three of the series of fifty cases presented a chest wall which on inspection appeared well nourished upon one side, with marked decrease of expansion and some contraction of the other side of the chest. Upon palpation the muscles were found to be slightly increased in tonus as compared to the muscles on the other side. There was also a dryness of the skin and a loss of normal elasticity suggestive of loss of fatty tissue directly under the skin.

Six of the series of fifty presented marked atrophy of all of the muscles of the chest wall although there was an increased tonus throughout. In five of these the palpating fingers located areas in the upper chest where the spastic muscles seemed to offer very little resistance in a fairly circumscribed area. Upon further physical and X-ray examination these areas were found to be directly over definite and apparently thin walled cavities. It would be fitting to state here that in the entire series of fifty cases there was X-ray and other physical evidence of cavitation in eleven cases. The inability of the examiner to find these cavities in more than five cases was probably due more to lack of skill than to absence of the signs.

In two of the series of fifty cases the patients

presented chests which were covered by a rather heavy layer of fatty tissue. There appeared to be an increased muscle tonus over the upper chest; however, the findings were somewhat questionable.

A careful check-up on the above cases revealed that in every case there were changes from the normal in the muscles of the chest wall. This change in the muscles ranged from slight spasm of the muscles to extensive spasm, and in cases where the disease was chronic and of rather low grade activity, to degeneration of the muscles. It was found that there were changes from the normal in the skin and subcutaneous tissue and muscles of the neck down to the second or third rib anteriorly and to the spine of the scapula posteriorly. It was found that in cases of pulmonary tuberculosis of the apices, the sternomastoids, scalenii, rhomboids and trapezii were changed from normal. These muscles receive their enervation from the upper cervical nerves with the exception of the trapezius which receives its supply from the spinal accessory. The sympathetics from the lungs join the ganglia of the posterior roots of the upper cervical nerves and there communicate with the motor nerves in that region which supply the muscles of the upper chest wall.

From the above findings we feel justified in concluding that there is a definite reflex action in the muscles of the chest wall in all cases in which there is a chronic inflammatory condition due to pulmonary tuberculosis; that these changes range from slight spasm to extensive spasm and later atrophic changes in the muscles of the chest wall.

Rialto Building.

DISCUSSION

DR. LOGAN CLENDENING, Kansas City: This type of paper is one of the most valuable that can be read at meetings of this kind though not, perhaps, the most dramatic. You must remember that Dr. German has introduced a discussion of *physical findings*, which are the basis of medicine; he has emphasized inspection and the changes which he has seen and his acute observations have allowed him to record, are some of the very most important things for us to know about.

The work that has been done on this subject of which this is a part has been done by such men as Pottinger and Kronig and others, who have struggled to put the question of inspection and palpation in lung diseases on a par with percussion and auscultation. Avenbrugger's work, the first work on physical diagnosis, originally was on percussion. Laennec confined himself to auscultation. Twenty-five years ago we had little else in the way of physical signs; practically nothing which could be called inspection and palpation.

So far as these changes in the chest wall are concerned, there are two aspects I wish to mention briefly. In the first place, the question of changes in the chest wall according to Kronig's method of percussion. He felt in unilateral tuberculosis that he could detect an isthmus on one side narrower than

the other. He thought it was because the infected lung was smaller than the other. I am not sure this is the correct explanation. I have demonstrated in unilateral cases of tuberculosis that there is contraction of the intercostal muscles on the affected side. There is a smaller chest on that side than on the uninfected side; and I think that is the secret of the physical sign which Dr. Kronig demonstrated.

Another feature from the therapeutic standpoint is this: I think these changes are largely defensive. In the cases of artificial pneumothorax we used to believe the good we did the patient was due to the fact that the lung was compressed and the infectious matter squeezed out. I am not entirely convinced that this is true. I believe we produce a thick pleura and an immobile chest wall, and the good we do with artificial pneumothorax is to put the affected lung at rest.

The points Dr. German has brought out seem to me of first-grade importance.

DR. SAM SNIDER, Kansas City: I am glad to have heard such a paper, because it reminds us that we have other methods of examining chests than percussion and auscultation. Percussion and auscultation are splendid, particularly auscultation, but if you will stop to look at a chest you will find out a lot of things you cannot always find by other means.

Dr. German explained clearly the mechanism of the reflex which carries increased tone, or atrophy and loss of tone. I am not sure it is altogether a matter of tone. I believe there are metabolic changes in the muscle other than contraction which cause, first, contraction; later, relaxation; and finally, atrophy. These changes are most easily made out in the upper portion of the chest. If we look at a diseased chest carefully we will see some evidence of that disease. If there is a difference in the conformation of the wall of the chest on the two sides and not some other physical agent responsible, we may safely say there must be something wrong with the inside of this chest, either recent or old disease.

These changes are most easily appreciated in the trapezius muscle behind and the pectoralis muscle in front. If we look carefully we will see changes we cannot make out any other way. Sometimes it is easy to see that one shoulder is higher than the other. In such a case we must have a spasm on one side, or a worn-out muscle with atrophy on the other. We cannot always be sure which. We feel on one side a muscle that is spastic and the other relaxed. If you feel cords in a muscle you can say, "There is an atrophic muscle which shows the old disease." If you feel a relaxed muscle on one side and a taut one on the other, there may be a question which is normal.

Furthermore, there is a very definite small area of local atrophy found occasionally in the intercostal muscles in front more than behind. If we go over the chest with the tips of the fingers occasionally we find we drop into a "hole" between the ribs. When you find such a "hole" in the intercostal muscles in an old case of pulmonary tuberculosis, there is usually a cavity on that side high up in the lung.

My attention was called to this at our tuberculosis hospital in Kansas City. Dr. Pottenger said: "There is a cavity in this upper, and I believe there is a cavity here." The muscle phenomena were so evident that I went back every day for two weeks to feel that chest. I know now I can feel evidence of cavitation in some cases. If you do not it does not mean it is not there. If you do feel it the cavitation is usually there.

Three weeks ago I was showing my class evidence of cavitation, and took the patient and fluoroscoped

him and had a radiograph made. There was no cavity but there was a well developed miliary tuberculosis on that side.

DR. FRANK I. RIDGE, Kansas City: I believe most of the percussion that is practiced by us can be done just as well with our ears stuffed with cotton. Our real sense is dependent upon the resistance we feel under our fingers. I have studied these cases of muscle fatigue and degeneration in pulmonary tuberculosis for quite a good many years.

The proposition of sensing not only cavitation but consolidation and even pleural contractions is a finer adjustment than is allowed to most of us. On the other hand I believe that is what we do when we percuss. I think if you will attempt percussion with your eyes bound you will get your sensation of what you have underneath almost as well.

Another factor Dr. German did not mention is the fact the spasms are evidenced in chronic infections in the bronchial lymph glands at the hilus of the lungs. You will find a potential degeneration that comes out in cases of infection, especially of a chronic nature.

I think the doctor is to be commended on presenting this paper. It should be taught more in the medical departments of our schools where diagnosis is a factor.

RADIATION OF THE THYMUS IN INFANTILE ECZEMA

JOS. P. COSTELLO, M.D.

ST. LOUIS

Whether the thymus gland has or has not an internal secretion we do not know but we do know that when the thymus is enlarged a certain symptom complex may arise. Spasmodic croup and sudden death have long been attributed to such a pathological condition. More recently thymic asthma has been described, curable at times by X-ray treatment.

It is my purpose to suggest another physical sign attributable to thymic pathology. Pediatricians have long noted the tendency of infants with eczema to develop asthmatic bronchitis. The frequency of this combination or symptom complex means that the etiology must in some measure be the same for both diseases. I, therefore, began a routine X-ray examination in all cases of facial eczema in infants accompanied by an asthmatic bronchitis and found that a number of these cases had an unmistakably enlarged thymus.

I reasoned that if the thymus was the cause of the asthmatic bronchitis it too might be the cause also of the facial eczema; therefore, if the thymus were at fault an X-ray treatment of that gland should have a direct effect on both.

In the five cases treated the results were so convincing that I thought the following report of cases would stimulate further study of this method of treating these obstinate cases.

REPORT OF CASES

Case 1. Baby J., 10 months old. Normal delivery.

Birth weight 7 lbs., 8 ounces. Breast fed for the first six months. At three weeks child began to develop croup which became progressively worse until the infant was two months old. At this time facial eczema appeared, accompanied by recurrent attacks of bronchial asthma. When the eczema seemed to improve the bronchial attacks would become worse. At ten months an X-ray examination showed a very large thymus. After two exposures the eczema and bronchial asthma disappeared and have not returned.

Case 2. Baby B., six months old, weighing 18 pounds, came to me because of facial eczema. The birth weight was 8 pounds and 2 ounces. Breast fed up to the present time. At two months facial eczema developed accompanied by recurrent attacks of bronchitis. An X-ray examination of the thymus proved that the gland was enlarged. Two X-ray treatments were given resulting in a complete cure of the facial eczema and improvement in the bronchial asthma.

Case 3. Baby B., birth weight nine pounds, breast fed, one month old. Present weight 11 pounds. Developed typical attacks of bronchial asthma. One month later facial eczema appeared and an X-ray of the chest was then made. The thymus was found to be enlarged. X-ray therapy improved both conditions, especially the bronchial asthma. The eczema would return but only in small areas. As the exposure was quite short I believe the thymus was not sufficiently reduced.

Case 4. Baby O., birth weight 7 pounds 2 ounces. Breast fed. Developed facial eczema when two months old. At 5 months developed typical bronchial asthma. An X-ray examination at this time showed a markedly enlarged thymus. X-ray treatments were then given, the eczema quickly disappeared but the bronchial asthma showed little or no improvement.

Case 5. Baby L., birth weight 8 pounds and 5 ounces, developed croup shortly after birth. It was breast fed. At two months facial eczema appeared. Six weeks later bronchial asthma appeared and with its appearance the eczema improved only to grow worse as the asthmatic attack subsided. At 7 months X-ray examination of the chest showed an enlargement of the thymus. X-ray therapy improved both conditions.

The average physical findings in the above cases were as follows: A tendency to obesity, a delay in development, a general adenopathy, enlargement of the tonsils and adenoids, a widening of the sternal dullness on percussion, and a widening of the tracheal breath sounds. In none of the above cases was there anything unusual in laboratory examinations, such as Wassermann, tuberculin tests, etc.

My conclusions from the above are, first: The thymus is a *probable* cause of certain types of facial eczema. Second: That facial eczema and bronchial asthma in early infancy are each a part of one disease. Third: That a reduction of the thymus, by means of the X-ray, is a means of improving and oftentimes curing this symptom complex.

Lister Building.

CARCINOMA OF THE SPLEEN

PRIMARY IN THE PROSTATE GLAND*

ALBERT S. WELCH, M.D.

KANSAS CITY, MO.

REPORT OF CASE

History. J. T., a teamster, 76 years old, entered the hospital April 22, 1924, complaining of paralysis of the body below the hips and incontinence of the bowel and bladder. The onset had been gradual and the duration 14 months.



Fig. 1. Sectioned spleen showing tumor tissue at the surface, A, and deep, B.

*From the Pathological Laboratory of the Kansas City General Hospital.

Examination. The patient was bedfast. The scrotum was raw and wet with urine and the feet were edematous. Ankle jerks were not elicited. The urine was alkaline, contained albumin, many leukocytes and in the final examination, blood. The Wassermann and Kahn tests were negative. The temperature, pulse and respiratory rate were normal.

Clinical diagnosis. Possible cord tumor; senility. No change was noted until April 16, 1925, when bloody urine was passed. Death occurred six weeks later.

Autopsy findings. This was the body of a well developed but markedly emaciated white male apparently 76 years old. All of the teeth were missing. The cervical glands were not enlarged. The legs were flexed at the knees and could not be extended beyond 150 degrees. There were a few superficial decubital ulcers over the sacrum. The penis was swollen, with dried blood at the meatus. The feet were not swollen.

The aortic and mitral valve leaflets were thickened at their free margins, but otherwise no noteworthy change had occurred in the heart, and the foramen ovale was closed. There were a few yellow plaques in the intima of the aorta, most marked at the iliac bifurcation.

Both lungs were studded with tumor nodules, some as large as 5 mm. dia., most numerous at the pleura. There were also nodules under the parietal pleura, embedded in the third to eighth ribs inclusive. There were firm adhesions between the lungs and the adjacent chest wall at these points. A few small regions of bronchopneumonia were present. The hilus glands apparently contained no tumor tissue.

The only enlarged abdomino-pelvic lymph glands found were one, 1.2 cm. dia. at the right of the prostate gland, another 2.8 cm. dia. medial to the right iliac artery, and another 1.3 cm. dia. left of the abdominal aorta at the iliac bifurcation. They contained tumor tissue.

The liver was small, firm, yellow mottled, granular at the surface, and weighed 1,220. G. It contained no tumor tissue grossly.

The spleen was normally free and its surface smooth. Its dimensions were 17.8, 14, and 7.8 cm. and it weighed 1,010. G. It was quite firm and cut with difficulty. There were disseminated tumor nodules, some 1.6 cm. dia., uniformly firm, white and polyhedral. The splenic capsule was irregularly thickened.

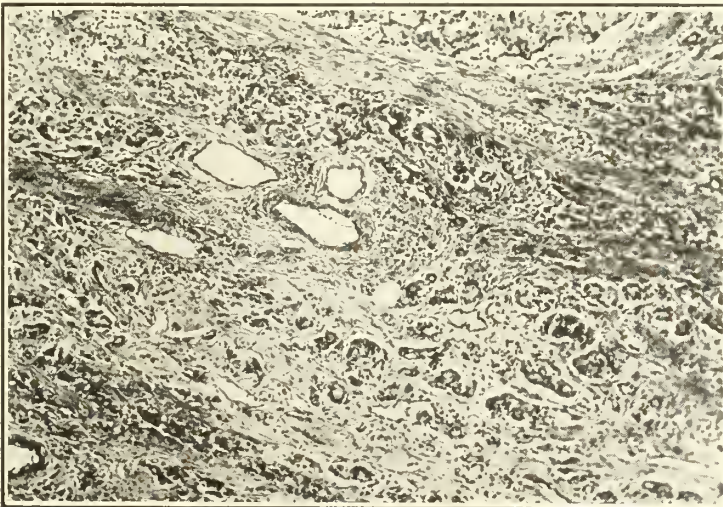


Fig. 2. Adenocarcinoma of the prostate gland, primary. x 80.

There was a tumor nodule 2.1 cm. dia. in the distal third of the left suprarenal gland and one 2 mm. dia. in the distal third of the right. There were a few tumor nodules 1. mm. dia. in the cortex of both kidneys.

The bladder was moderately distended by clear amber urine. There were many diverticuli in its posterior wall. The prostate gland was hard, coarsely nodular, and approximately 5. cm. dia. There was marked angulation in the prostatic urethra. The mucosa between the urethral and the right ureteral orifices was elevated approximately 5. mm. by tumor tissue. No ulcerated areas were present. The prostate gland cut with difficulty and surfaces thus made were mottled gray and white without the usual characteristic spongy appearance.

Metastasis apparently was from the prostate gland to adjacent lymph nodes, then by way of the lumbar lymph vessels to the thoracic duct, through the innominate vein into the right heart and thence into the lungs. In the blood stream, metastases may thus have followed via the left heart to the spleen which has a large arterial supply from the celiac axis. That the liver was not grossly affected may be attributed to its double blood supply in which the portal vein furnishes a large amount of blood, and to the fact that the hepatic artery is turned sharply upward a short distance from its celiac

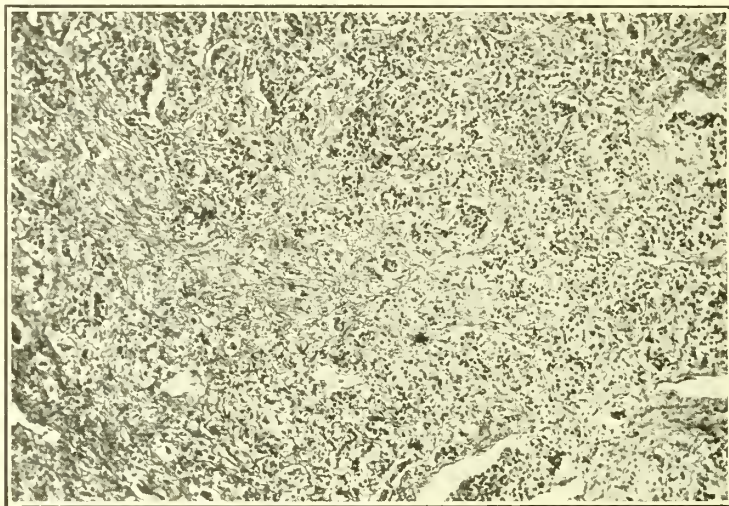


Fig. 3. Adenocarcinoma of the spleen, secondary. x 80.

There were poorly circumscribed soft porous regions in the fourth and fifth lumbar vertebrae and the spinal cord was soft at these points.

Anatomic diagnosis. Carcinoma of the prostate gland; metastatic carcinoma of the lungs, vertebrae, ribs, spleen, suprarenal glands and kidneys; multiple diverticuli of the bladder; pressure myelitis of the spinal cord; bronchopneumonia; atrophic cirrhosis of the liver; chronic arthritis; general arteriosclerosis; senile osteoporosis; bilateral arcus senilis.

Secondary carcinoma of the spleen is rare. S. W. Sappington¹ has given a summary of cases reported up to April, 1922, and Kaufmann² states that the spleen was involved secondarily in 0.7 per cent. of 1078 cases of carcinoma examined at Basel. In these cases, the primary growths were in the uterus, rectum, stomach, penis, breast, gallbladder and kidney.

Carcinomas usually metastasize by way of the lymph vessels. In order to reach the spleen, it has been suggested that metastasis must be by way of the blood vessels. In the case described, there were tumor masses in the lymph glands at the right of the bladder and in glands along the iliac arteries, but no gross involvement of the other peritoneal lymph glands. The thoracic duct was not involved grossly

origin. Possibly also, tissue susceptibility played some part.

SUMMARY

Herewith is presented a case of carcinoma of the spleen secondary to carcinoma of the prostate gland, and a suggestion offered as to its probable pathogenesis.

835 Rialto Building.

REFERENCES

1. Sappington, S. W. Carcinoma of the spleen; its microscopic frequency; a possible etiologic factor. *J. A. M. A.* 78: 953, Apr. 1, 1922.
2. Kaufmann. *Spezielle Pathologische Anatomie*, Erster Band, S. 187, 1922.

THE PHLORHIZIN TEST IN THE DIAGNOSIS OF PREGNANCY.—The test is made by injecting 0.002 gm. of phlorhizin into the gluteal muscles of the patient, who has been fasting. The patient drinks 200 c.c. of water. Immediate test of the urine for sugar serves as a control. Six specimens of urine are examined, at fifteen minute intervals, for glycosuria. If glycosuria is provoked, the test is reported as positive; otherwise, negative. Reports on the reliability of the test are conflicting. (*Journal A. M. A.*, April 25, 1925, p. 1292.)

ETHER ANESTHESIA

RELATION OF PLANE OF ANESTHESIA TO (1)
CIRCULATORY DEPRESSION. (2) SURGICAL
TECHNIC

RALPH M. WATERS, M.D.
KANSAS CITY, MO.

Two recently described physical signs accompanying general anesthesia will be discussed with a hope of shedding some light upon two practical problems of anesthesia:

1. Why does ether anesthesia do serious damage to one patient who is in good condition while another case is not harmed by similar treatment?

2. Why is the surgeon annoyed by "insufficient relaxation" in one case while another patient subjected apparently to the same surgical and anesthetic technic, causes him no inconvenience?

In 1920 Guedel published "A Sub-Classification of Third Stage Ether Anesthesia"¹ in which he first described the progressive paralysis of the extrinsic muscles of the eye ball, that occurs as ether anesthesia is deepened. By means of this sign and others he subdivided third stage, or surgical, anesthesia into four planes. Miller has recently described² an ascending paralysis of the respiratory muscles progressing, as anesthesia is deepened, up through the dorsal segments, which supply the thoracic muscles, to the fourth cervical segment from which the phrenic nerve arises. This, according to Miller, results in a classification of ascending respiratory paralysis, as follows: 1. Mixed or usual type. 2. Delayed thoracic type. 3. Abdominal type. 4. Exaggerated abdominal type.

For the sake of brevity an attempt has been made in the accompanying chart, to add Miller's observations to the chart used by Guedel in his original communication.

You will observe that the end of the first plane, Guedel marked as the point of complete paralysis of the extrinsic eye muscles. His fourth plane began when shallow respiration sets in immediately preceding the fourth stage of anesthesia, or respiratory arrest. His division of the second from the third plane was marked only by pupil changes which are undependable in many circumstances. We are suggesting that the point where thoracic breathing ceases, as described by Miller, be taken as the end of Guedel's second plane. With this chart in mind, then, may we come back to the question, why are some cases damaged by a simple ether anesthetic while others are not?

EFFECT OF ETHER ON CIRCULATION

When a patient is carried into a heavy enough dosage of ether to enter the third plane with thoracic muscle paralysis, all the load of respiration must be borne by the diaphragm. The rhythmic change in negative pressure in the chest with each respiratory cycle no longer is completely efficient and the large vessels of the chest are not filled with blood at each inspiration. A greater load is therefore thrown upon the heart muscle³ and it is only a question of time until circulatory shock will supervene. The time varies with the circulatory muscular strength of the individual when anesthetized. If the dosage is still further increased and the fourth plane is entered, where only the dia-

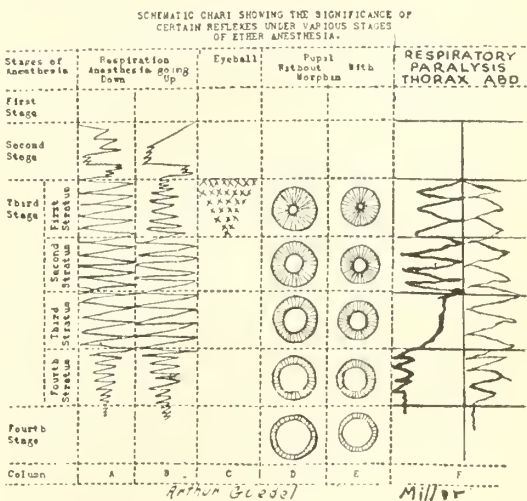


Fig. 1. Ascending paralysis of respiratory muscle (Miller) fitted into Guedel's classification of third stage anesthesia. Note in column C that eye ball movements are roving or pupil fixed off center during first plane. In second plane and below the eye ball is fixed on center (complete extrinsic muscle paralysis). In column F, respiratory movements of the thorax are shown on the left and of the abdomen on the right. Note that thoracic breathing stops at the end of the second plane.

phragm works and its action is depressed, the time limit is still shorter. Deep in the third and throughout the fourth plane, loss of intercostal muscle tone appears as well as paralysis, and the chest actually sinks in with each inspiration. Thus handicapped the effort of the diaphragm can no longer compensate and the patient takes on a semicyanotic pallor due to incomplete lung aeration as well as embarrassed circulation.

Acute and chronic toxemias and well developed or beginning myocarditis, whether previously recognized or not, all shorten the time that circulatory muscle will stand the loss of support of the respiratory movements of the thorax.

Loss of thoracic breathing, in its effect on the heart muscle, is not dissimilar to the condition

*Read before Jackson County Medical Society, April 28, 1925

brought about by obstruction of the upper airway, in which the normal change in amount of negative pressure cannot take place during each respiratory cycle. Either condition may prove fatal if too long continued in certain individuals. Such interference with the rhythmic negative pressure variation is much more damaging than the cyanosis which may accompany it. For instance, notice the fact that given a free airway and active mixed type of breathing, marked cyanosis may be maintained by forcing the patient to breathe high percentages of nitrous oxide gas and no harm will result to the circulatory muscle.

ABDOMINAL RELAXATION

May we now consider the second question: Why does one anesthesia result in an abdomen in which it is easy to work while another constantly embarrasses the surgeon with rigidity and protrusion of the viscera at each inspiration?

When the costal muscles are paralyzed (third plane anesthesia) the diaphragm, in its effort to maintain respiration, causes extreme excursion of both viscera and abdominal wall, until the fourth plane is reached and beginning phrenic nerve paralysis is occurring. If at the same time there is cyanosis, due either to insufficient respiration or to obstruction of the upper airway, muscular rigidity or spasm may be present (anoxic spasm). In addition the failure of the great thoracic vessels to fill with each respiratory cycle, results in engorgement of the veins of the abdomen and the effect may be that of an abdominal tumor, that is actual increased bulk of the cavity contents. If under such circumstances the anesthesia is gradually lightened until the second or first plane is reached and thoracic breathing reestablished, the difficulty will often be overcome.

TECHNIC

The proper dosage of a patient with ether to maintain that person constantly in the second or first plane of third stage anesthesia is simply a mechanical problem of *fine* and *constant* control of ether added, together with the maintenance of an absolutely free airway. This is not so simple as it sounds and much the easier way is to maintain the patient in plane four with shallow diaphragmatic breathing only. The interest of the patient, however, is best served, I believe, by team work between surgeon and anesthetist. A delay of a few seconds or even minutes, while depth of anesthesia is readjusted, would appear to be of less damage to the patient than is the extra load on the circulatory muscle when third or fourth plane anesthesia is maintained.

CONCLUSIONS

1. The recent literature presents two notable additions to the physical signs of general anesthesia, (a) Guedel's subdivision of surgical anesthesia into four planes with a definite marking of the end of the first plane as the point when extrinsic eye muscle paralysis is complete; (b) Miller's observation of the ascending respiratory muscle paralysis that occurs as anesthesia is deepened.

2. In this paper we have taken the liberty to suggest that the point described by Miller as marking cessation of thoracic breathing be used as the beginning of Guedel's third plane.

3. The paper attempts to show that the first and second planes of third stage anesthesia are much less damaging to the circulatory muscle than are deeper planes, because the respiratory movements of the chest still support circulation.

4. We have tried to present evidence that the first and second of these four planes, marked by the findings of Guedel and Miller, may be better suited to the requirements of abdominal surgery than are the third and fourth planes, because diaphragmatic movement is less, abdominal venous engorgement is not present, and anoxic rigidity of abdominal muscles is not present.

5. A further inference may be made that damage to the circulation during ether anesthesia is not due to chemical effects on the heart, but to added load placed on that organ when the respiratory muscles supplied by dorsal segments of the cord, are paralyzed.

515 Wirthman Bldg.

REFERENCES

1. Guedel A. É. A Sub-Classification of Third Stage Ether Anesthesia. Bulletin N. A. R. S., No. 3, 1920.
2. Miller A. H. Ascending Respiratory Paralysis Under General Anesthesia. J. A. M. A., Vol. 84, No. 3, P. 201.
3. Note:—The following quotation is from McCleod's Physiology, Third Edition, P. 323.
"The movements of respiration produce effects on the vascular system that are of considerable importance in maintaining the circulation of the blood."

SIMPLE IMMEDIATE TREATMENT FOR VOMITING

All patients suffering from symptoms of reverse peristalsis in the upper gastro-intestinal tract from various causes, were given amounts of 2 per cent sodium chlorid solution varying from 50 to 200 c.c. In every case there was immediate relief of symptoms, but in several cases the relief was transient. Edwin P. Lehman and Harry V. Gibson, St. Louis (*Journal A. M. A.*, April 25, 1925), suggest the possibility that the action is a local one, tending to establish forward peristalsis in the stomach, no matter what the cause of the reversal. It may be found that the expression of this effect in amelioration of symptoms depends on the intensity of the abnormal stimuli to reversal of peristalsis. The treatment is so simple and harmless that it deserves a trial by clinicians everywhere, with a view to confirming or disproving these observations.

THE JOURNAL

OF THE

Missouri State Medical Association

OCTOBER, 1925

EDITORIALS

GOVERNOR BAKER APPOINTS NEW STATE BOARD OF HEALTH

On September 16 Governor Baker requested all the members of the State Board of Health to resign their positions, in order that he might be left free to appoint a new Board. All the members of the Board affected by the Governor's letter acceded to his request. One member, Dr. T. H. Wilcoxen, Bowling Green, did not receive the letter because his term expired in 1922 and he had never been reappointed. Therefore, he held the office merely until the appointment of his successor.

On September 20, the Governor announced that he had appointed the following members of the Board: Dr. Wm. A. Clark, Jefferson City; Dr. Elmer T. McGaugh, Richmond; Dr. Willard Bartlett, St. Louis; and Dr. Herbert A. Breyfogle, Kansas City. The following members of the former Board were reappointed: Dr. James Stewart, Jefferson City; Dr. Homer L. Kerr, Crane; Dr. Herman S. Gove, Linn.

In the announcement the Governor stated that he desired to have Dr. Clark elected President of the Board and Dr. James Stewart reelected Secretary, and he directed that the Board hold a meeting in Jefferson City on Wednesday, September 23, to organize.

Dr. Cortez F. Enloe, of Jefferson City, former secretary of the Board, was not reappointed.

HONORS FOR ST. LOUIS PHYSICIANS

All physicians are familiar with the brilliant work done by Dr. Everts A. Graham, Professor of Surgery, Washington University Medical School; Dr. Glover H. Copher, Instructor in Surgery, and Dr. Warren H. Cole, Resident Surgeon at Barnes Hospital, in developing a method for making cholecystography effective in the diagnosis of gallstones and gallbladder conditions by means of the X-ray.

In recognition of this achievement the American Roentgen Ray Society has awarded the Leonard Prize to the discoverers, and the American Radiological Society has awarded

them the Gold Medal offered by that body for distinguished work in roentgen ray research.

The discovery and its application in surgery was presented to the International Congress of Radiology by Dr. Sherwood Moore, Assistant in Surgery at Washington University Medical School, in London in July last.

It is pleasant to note a layman's reaction to a discovery of this nature in the field of medicine and we believe our members will enjoy reading the comment. We refer to an editorial in the *St. Louis Globe-Democrat* of September 21, under the caption "Honors for St. Louis Men," which we quote:

St. Louis, we think, should take no little pride in the awards of honor that have come to three St. Louis physicians, one from the Roentgen Ray Society and the other from the American Radiological Society for distinguished achievement in the field of diagnosis by X-ray. Two of these physicians, Dr. Graham and Dr. Copher, are members of the faculty of the Washington University Medical School, and the third, Dr. Cole, is resident surgeon of Barnes Hospital. Apparently they have worked together in the researches that have resulted in the discovery of a means of diagnosing diseases of the gallbladder that seems to be almost infallible, whereas correct diagnosis of such disease has been surrounded with the greatest difficulty in the past.

The first essential in the treatment of any disease is the knowledge of its location and nature. The old-time physician accomplished a great deal by the observation of symptoms, but until comparatively recent years diagnosis was largely empirical rather than scientific. No thing in medical progress has contributed so much to modern scientific diagnosis as the X-ray, by means of which the character and extent of many internal diseases may be determined with the greatest accuracy. But still the X-ray has its limitations. It can only disclose conditions that reveal a more or less definite shadow under the X-ray, and that shadow is dependent upon the existence of something that gives sufficient substance to the object to make an impression upon the photographic plate, or to make it visible through the fluoroscope. Diseases of the gallbladder, we infer, have not been open to very successful X-ray examination, because they nor the organ itself could not be satisfactorily observed by this process. But these St. Louis physicians have discovered a drug which, injected into the veins or taken by mouth, concentrates itself in the gallbladder and makes abnormal conditions within it readily observable.

This is regarded not only as a great advance in the diagnosis of the diseases of this particular organ, but as establishing a new principle for the detection of disease by the utilization of the secretory functions to make them subject to X-ray examination. The method discovered by the St. Louis physicians has been in use long enough to become scientifically established, and the very high awards bestowed upon them by the chief authorities in this field of scientific research indicate the extraordinary value of the discovery in the opinion of the profession. Is it by such men and such research that medicine is advanced and the world made better."

Such comment as this by an influential metropolitan newspaper must have a large influence in impressing upon laymen the altruistic motives and the untiring labors of the

regular medical profession toward the alleviation of the ills of the flesh and, where possible, the elimination of disease.

INCREASE IN STATE ASSOCIATION DUES

At the Annual Meeting of the House of Delegates held at Kansas City, May 4-6, 1925, the amount of the annual dues to the State Association was increased from \$5 to \$8 per member, beginning January 1, 1926.

The question of raising money by voluntary contribution to meet legislative expenses was thoroughly discussed by the delegates and it was generally acknowledged that such a method was futile.

With this increase in dues it is hoped that enough money may be laid aside for legislative purposes; for the expense of sending speakers and instructors to county society and district meetings; for an annual meeting of the Councilors; for enlarging the benefits of defense in malpractice suits; for sending material to county and city newspapers to instruct the people in the real purposes of organized medicine and increase their faith and confidence in the reputable physician and members of the organized profession; to make our Association more influential with the layman and organized lay bodies, and to enlarge the usefulness and influence of our State Association JOURNAL.

Other State Medical Associations have long ago abandoned the \$5 dues and increased the amount to \$10 and even more than that sum in several instances. They are doing for their members the things that our Association should do for its members. We hope the increased amount of dues will enable us to accomplish these things.

HEALTH SERVICE FOR ST. LOUIS UNIVERSITY STUDENTS

With the beginning of the present fall semester, St. Louis University will initiate a Student Health Service which is but a further demonstration of the interest the institution takes in the welfare of its student body. Hitherto there has been no specific provision for caring for the health of the students but next fall the Student Health Service Division will begin operating.

The functions of the Division will be three fold: First, to give each new student a complete physical examination; second, to provide a clinic where any student may apply for treatment or diagnosis concerning any ailment at any time; third, to provide medical service in the home of any student at all hours of the day or night.

This Student Health Service is to be organized as a Division of the Department of Internal Medicine of the St. Louis University School of Medicine and will be under the supervision of the director of that department and under the direction of a physician directly responsible for the organization of this service. In addition there will be several physicians on service for the other work of the division.

The object of the general physical examination is primarily to discover whether there exist any physical or functional abnormalities in each student. Thus, possessing this knowledge, the examining physician is in a position to advise the student how to order his manner of living so that the disability may be overcome.

It frequently happens that a student apparently suddenly develops some disability—not an infectious disease such as pneumonia, or measles, but some condition such as minor heart disturbance; usually this condition is not one which has just appeared but is of long standing, and has possibly become progressively more marked until finally it could no longer be ignored. Such conditions, if recognized early, can be treated and often cured, or with proper living the afflicted person may have a long life of activity, instead of becoming a potential invalid. It is planned that the physical examinations of the Health Service shall accomplish just such work.

The clinic will be open to the students at all times for consultation or treatment for all types of ailments, whether they be minor and apparently trivial or whether they be evidently of a more serious nature.

The physician or physicians of the Student Health Service will be on call through a central office at all hours of the day or night to respond to the needs of those students who are taken suddenly ill and are confined as a result of this illness to their homes.

It is hoped by this three fold service to improve the well being of the student body and to enable St. Louis University to send out into the world a healthier and stronger group of men and women.

ERRATUM

Our attention has been directed to the omission of an important datum in the account of the ceremonies connected with laying the corner stone of the St. Louis Medical Society building, published in our August issue. In that account, under the subtitle, "Remarks by Dr. Amand Ravold," it was stated that, "In 1905 the society leased a lot in the rear of the medical library and built an auditorium upon it." What we failed to mention was that, "for eight years Dr. Alonzo R. Kieffer was treasurer

of the St. Louis Medical Society and through his foresight and financial ability succeeded in saving from the dues a sum of money sufficiently large to permit the society in 1905 to begin the construction of the present auditorium upon a lot leased from the St. Louis Medical Library Association."

Dr. Ravold desires us to say that he mentioned these facts in his extemporaneous address at the ceremony but failed to incorporate them in the manuscript sent to *THE JOURNAL* for publication.

We are glad to add this information to the records and give to Dr. Kieffer the credit that is due him.

NEWS NOTES

Dr. James G. Montgomery, Kansas City, has moved his offices to Suite 1111 Rialto Building.

Dr. John Lavan, Kansas City, has been appointed city epidemiologist for Kansas City by the hospital and health board.

Scholarships on the Oliver-Rea Foundation for graduate study in medicine are available at the New York Post Graduate Medical School and Hospital. Inquiries should be addressed to the Dean, 301 East 20th Street, New York City.

Dr. George B. Tuttle, Kauai, Hawaii, is visiting in St. Louis and doing postgraduate work in the medical schools. Dr. Tuttle is a graduate of Washington University School of Medicine, 1894, and has for twenty years practiced in Kauai.

Dr. Ariel W. George, of Boston, Mass., will address the Adams County (Ill.) Medical Society at its next meeting on Monday, October 12, at 8:15 p. m., in the Chamber of Commerce, Quincy, Ill., on "The Present Status of Gastro-Intestinal Examination by X-Ray." Dr. George is one of the best known radiologists in this country. Every ethical physician is invited to attend the meeting.

Dr. Sherwood Moore, St. Louis, radiologist in Washington University School of Medicine, has returned home from London where he attended the meeting of the International Congress of Radiology, July 1-4. Dr. Moore read a paper on "The Development and Application of Cholecystography." This was the first meeting of the International Congress of Radiology.

A permanent organization was effected at the London session, the Congress to meet every three years. The next session will be held in 1928 at Stockholm, Sweden.

United States Civil Service Commission announces an open competitive examination for applicants for the positions of Junior Medical Officer, Assistant Medical Officer, Associate Medical Officer, Medical Officer and Senior Medical Officer. Applications will be received until December 30. Competitors will not be required to report for examination at any place, but will be rated on their education, training and experience. Full information and blanks may be obtained from the Commission at Washington, D. C., or from the Secretary of the Board of Civil Service Examiners in the post office in any city.

Frequent inquiries are received at the office of the Surgeon General, of the United States Public Health Service, asking if the "National Health Service" located in Washington, D. C., has any connection with the Public Health Service or with the government of the United States.

On numerous occasions, letters evidently intended for the "National Health Service" have been addressed to the Public Health Service and it was clear that the writers believed the "National Health Service" to be a branch of the federal government.

Surgeon General H. S. Cumming desires to announce that the "National Health Service" which advertises and sells a "Health Book," has no connection whatever with the Public Health Service, and insofar as can be learned, with no branch of the government.

It should be definitely understood that the Public Health Service does not endorse this self-styled "National Health Service" or its books.

This announcement seems necessary in fairness to the general public.

On July 28, Colonel Llewellyn Powell Williamson, of the Medical Corps, United States Army, died at Letterman Hospital, San Francisco. Colonel Williamson was 51 years old and was the son of Dr. and Mrs. J. W. Williamson, of St. Louis. The remains were shipped to Washington, D. C., and interred in Arlington Cemetery.

Colonel Williamson was a graduate of the Missouri Medical College (now Washington University School of Medicine), 1897. He served in the Spanish-American War and was stationed on the Mexican border at the time of

the uprising there. During the construction of the Panama Canal he was an assistant to Surgeon-General Gorgas. He was made chief surgeon of the 89th Division during the World War and having made an extensive study of the methods of gas warfare he was instrumental in the organization of the gas warfare department of the Army. Since the close of the war Colonel Williamson served at a number of army hospitals and prior to his illness was stationed at Fort Winfield Scott, near San Francisco. Surviving him are his wife, Mrs. Mary Bartlett Williamson and his parents.

Colonel Williamson was well known in St. Louis where he practiced for several years specializing in ophthalmology.

The first unit of "dial" telephones in St. Louis is to be ready for operation by spring, according to a recent announcement by Percy Redmund, General Manager of the Southwestern Bell Telephone Co.

The initial cut of 2000 telephones will be added to daily until by midsummer more than 14,000 "dial" telephones will be in operation. In three years this number is expected to be increased to 60,000, and ultimately the entire city will be thus served.

Two new central offices, "Laclede" and "Prospect," will be established at Grand Boulevard and Botanical avenue to serve many "Victor," "Grand," and "Sidney" telephones.

In view of the fact that certain central office names begin with the same or nearly the same two letters, it will be necessary to make seven changes in present names in order that conflicts in dialing may be avoided. The new names will be "Hiland" instead of Benton; "Jefferson" instead of Bomont; "Fremont" instead of Bomont (coin telephones); "Locust" instead of Central (party lines); "Atwater" instead of Ferguson; "Garfield" instead of Olive; "Humbolt" instead of Sidney.

St. Louis will be known as a "six pull" exchange; that is, six pulls of the dial will be necessary to call a number. Thus the first two letters of the central office, as PA in Parkview or CE in Central, will be dialed, followed by four pulls for the four figures of the number.

If present numbers contain less than four figures, zeros will be placed before them to bring them up to the required total. Thus, such numbers as GARfield 0066 may be noted in the next telephone directory.

The introduction of "dial" telephones into St. Louis is in line with progress being made in other large cities. Telephone engineers point out that the equipment to be used there is to be of the most modern type that has proven successful in New York, Chicago, Kansas City, St. Joseph, and other cities.

A health institute for parochial school teachers was held in St. Louis August 25 and 26 for the purpose of training teachers for a more efficient imparting of health instruction to their pupils. Members of the St. Louis University Medical School faculty in conjunction with other health specialists, appointed by the St. Louis Tuberculosis Society, conducted the lectures. The following subjects were treated by their respective medical experts: "Biology in Relation to Health," by Rev. A. M. Schwitalla, S. J., Regent of St. Louis University Medical School; "Respiratory Diseases," by Dr. Ralph Kinsella, Director of the Department of Medicine of St. Louis University; "Diet and Health," by Dr. Don R. Joseph, Vice Dean of St. Louis University Medical School; "Tonsils and Adenoids," by Dr. Hanau W. Loeb, Dean of St. Louis University Medical School; "Care of the Eyes," by Dr. W. H. Luedde, Director of the Department of Ophthalmology of St. Louis University; "Health Menace of Patent Medicines," by Dr. John Auer, Director of the Department of Pharmacology of St. Louis University; "Dental Hygiene," by Major Clarence Lauderdale, Director of the Department of Military Dentistry of St. Louis University; "Periodic Physical Examination and Correction of Defects," by Dr. E. L. Shrader, Director of Physical Examination, St. Louis University; "Mechanics of Teaching Health," arranged by the St. Louis Tuberculosis Society; "Duty of the School in the Public Health Field," by Dr. Allen J. McLaughlan, Superintendent of the U. S. Marine Hospital; "History of the Movement of Health Education," by Miss Mary E. Spencer, Health Education Specialist of the St. Louis Tuberculosis Society; "Physical Education," by Dr. Willis H. Summers, Physical Education Director of Washington University; "Class Room Inspection and Demonstration," by Miss Sophie Nelson; "Class Room Methods of Teaching Health," by Miss Mary E. Spencer; and "The Rounded Out Program and Plans for Next Year," by Miss Harvey Smith, Health Education Director of the St. Louis Tuberculosis Society.

Announcement has been made by Dr. Don R. Joseph, Vice Dean of the St. Louis University School of Medicine, concerning the completion of the resident staffs of two St. Louis hospitals. The university hospital embraces the group of St. Mary's Hospitals owned and conducted by the Sisters of St. Mary of the Third Order of St. Francis, namely, St. Mary's Hospital, St. Mary's Infirmary and Mt. St. Rose Hospital. These hospitals have placed their medical and educational activities at the exclusive service of St. Louis University Medical School.

The associated hospitals and dispensaries include Alexian Brothers Hospital, St. Anthony's Hospital and St. John's Hospital. By order of the Director of Public Welfare and the Hospital Commissioner St. Louis University will appoint the medical staff of unit 2 of the City Hospital and one-half of the staff of the Isolation Hospital. Consulting neurologist and consulting surgeon of the St. Louis City Sanitarium are also St. Louis University nominees.

The following appointments have just been made for St. Mary's Infirmary and St. Mary's Hospital, respectively. St. Mary's Infirmary: Associate Resident Physician, Dr. Goronwy O. Broun; Resident in Medicine, Dr. Octavio Garcia; Assistant Resident in Medicine, Dr. Eugene F. Moore; Resident in Surgery, Dr. James L. Mudd; Senior Intern in Surgery, Dr. Robert J. Galvin; Junior Interns, Doctors Frederick T. Burke, James R. Nakada, John A. Phipps, Phineas Rabinovitch, William H. Riley, Frederick K. Sauer, William R. Vizzard, Salvador Cerda and James D. Harper. St. Mary's Hospital: Resident in Surgery, Dr. Antonio Tripodi; Resident in Medicine, Dr. Francis J. Medler; Resident in Obstetrics and Gynecology, Dr. H. A. Day; Senior Intern in Surgery, Dr. Frederick H. Aid; Junior Interns, Doctors Edward A. Amaral, Lilburn C. Boemer, Charles H. Dittman, Charles E. Eversberg, John C. Guenther, Charles M. Hayes, Edward A. McMurray, Harold J. Ott, Bryant H. Trewyn, James P. Wade and Robert S. Wallace.

OBITUARY

JOHN PATRICK BURKE, M.D.

Dr. John P. Burke, California, Mo., a graduate of St. Louis Medical College (now Washington University School of Medicine), 1878, died suddenly at his home August 31, 1925, aged 68 years.

Dr. Burke had been on an early morning call and upon his return was preparing to get into bed when he suddenly collapsed. His wife hastened to aid him but life was extinct.

Reared an orphan, his mother having died at his birth and his father, Dr. John Burke, a California druggist, having died when the doctor was but three years old, he was cared for by loving friends, the late Dr. J. P. H. Gray, of California, Mo., being his guardian. His early education was obtained in the public and preparatory schools in his community and upon his graduation from medical college he spent his vacation studying medicine in his guardian's office.

On June 26, 1878, Dr. Burke was married to Miss Alice Teresa Smith, of California, and they established their home in a residence occupying the lot where the Burke office now stands until 1904, when they moved to the present Burke residence.

Although a busy man professionally Dr. Burke managed to lend his activities in public, church and social affairs. Besides serving a term as mayor of the city he had been a trustee in the Catholic church almost continuously during his professional career. He was a member of Moniteau County Medical Society for many years, serving as its president for a number of years, and had been Councilor of his district since 1918. His words of wisdom and cherry smile never again will grace the meetings of the medical profession but the good influence of his affiliation which he has left behind never will be effaced.

At the time of his death Dr. Burke was president of the Central Loan, Building and Savings Association. He had served several terms as county coroner and was local and dispensary surgeon for the Missouri Pacific Railroad for many years.

The matter of compensation for his service was never taken into consideration by him when sickness called; in fact, often were the times when he traveled miles in good weather and bad, giving of his time and strength to the afflicted, well knowing that no reward was to be his except that peacefulness of soul which comes to him who by serving his fellow men serves God. During his years of practice he had officiated at the birth of 2610 babies.

That his unfaltering service and love of humanity did not go unheeded is evidenced by the fact that only about one-third of the persons who attended his funeral were able to get into the church, so great was the crowd of sorrow-stricken neighbors and friends. Funeral services were conducted at the Annunciation Catholic church, the ground for which had been donated by Dr. Burke, and several priests from various towns in the state assisted in the service. A number of physicians from surrounding towns attended in a body. They laid him away in the Catholic cemetery at the side of his mother and father. Surviving him are his widow, one son, Dr. J. P. Burke, of California, and three daughters.

JOHN BLASDEL SHAPLEIGH, M.D.

In the death of Dr. John B. Shapleigh, St. Louis, at the St. Luke's Hospital in St. Louis, September 15, 1925, the medical profession of that city and of the state and nation has lost an outstanding character and a citizen of wide and useful influence. He was 67 years old

and had been in active practice in St. Louis for 44 years. Dr. Shapleigh was a native of St. Louis, the son of Augustus F. Shapleigh, founder of the Shapleigh Hardware Company, and received his premedical education at Washington University from which he graduated in 1878. He then entered the St. Louis Medical College (now Washington University Medical School) receiving his medical diploma in 1881 and soon became an important member of the staff of the St. Louis Medical College. Devoting himself to the study of otology, he originated the otological clinic of the Washington University Medical School and remained at the head of the clinic until 1922. During the years of 1901 and 1902 he was Dean of the Medical School. He was successively lecturer on diseases of the ear in the medical school; clinical professor of diseases of the ear; professor of otology and clinical professor of otology; professor emeritus of otology. At the commencement exercises of the school in June, 1925, Washington University conferred upon Dr. Shapleigh the honorary degree of Doctor of Science, the presentation being made by Chancellor Hadley who reviewed the professional career of Dr. Shapleigh at that time. During his long years of practice in St. Louis and his association with physicians and laymen Dr. Shapleigh had made for himself a warm place in the hearts of a large number of people. His activities in the St. Louis Medical Society were numerous and he gave freely of his time and substance in promoting the welfare of the organization. During the recent campaign to collect funds for the new building of the St. Louis Medical Society, Dr. Shapleigh was especially effective in the position of chairman of the building committee and instrumental in the acquisition of many additions to the fund. He was a member of the St. Louis Medical Society, the Missouri State Medical Association, a Fellow of the American Medical Association, a member of the American Otological Society and a Fellow of the American College of Surgeons.

THOMAS CHOWNING, M.D.

Dr. Thomas Chowning, Hannibal, for fifty years an active practitioner in Marion and Monroe Counties, died at his home, September 16, 1925, after a brief illness, aged 73 years.

Dr. Chowning received his preliminary education at Central College, Fayette, Missouri, and graduated in medicine from the Missouri Medical College (now Washington University Medical School) in 1875. He was a faithful and influential member of the county and state medical societies, being a delegate from the Marion County Medical Society for several

terms; president of the county medical society and vice-president of the State Medical Association at various times; a Fellow of the American Medical Association and surgeon to the Levering Hospital at Hannibal. By his long years of faithful service in the medical profession and to humanity, Dr. Chowning has left an impress upon the community where he lived and in the medical organization that will live forever as a monument to one who tried to do good.

ERASMUS MCGINNIS, M.D.

Dr. E. McGinnis, Bismarck, a graduate of Marion Sims College of Medicine (now St. Louis University Medical School), 1896, died at his home September 8, 1925, aged 53 years. He practiced in St. Louis until 1913, when he moved to Bismarck and soon became an outstanding figure in the medical profession of the county. He was universally loved by all who knew him and especially was he loved and honored by his neighboring physicians. His activity as a practitioner, however, was destined to be short-lived for after a few years of general practice he was compelled to close his office and retire on account of failing eyesight. Although afflicted he always responded promptly and came to our rescue when we needed help and counsel. During the time I was his physician he always was patient and grateful for our efforts.

Dr. McGinnis was apparently in good health the day before he died and on the morning of his death arose as usual, walked into his garden and suddenly expired.

F. W. GALE, M.D.

HORACE ELLERY HAPPEL, M.D.

Dr. Horace E. Happel, St. Louis, is graduate of the Jefferson Medical College, Philadelphia, 1910, died September 1, 1925, at St. John's Hospital, St. Louis, from blood poisoning resulting from an infection on the nose, aged 41 years. He was a member of the St. Louis Medical Society, the State Medical Association and a Fellow of the American Medical Association.

In the death of Dr. Happel the medical profession of St. Louis and of the entire state has suffered a loss that cannot easily be compensated. He was a most careful, earnest and conscientious physician, highly esteemed by all who knew him and loved by his patients and friends. His unexpected death was a great shock to his friends and cuts off in the midst of an unusually useful career one who was contributing a wide and deep influence for good upon the profession and the public.

CORRESPONDENCE

A GOOD LETTER

Fornfelt, Mo., September 1, 1925.

TO THE EDITOR:

I am sending the following letter to each of the county medical societies in the Twenty-Second Councilor District. I hope it will have the effect of giving us a stronger and more effective organization in this district.

G. S. CANNON.

Dear Doctor:

At the last meeting of your county medical society this year officers for 1926 will be elected; also a delegate to attend the next state meeting. You should exercise care and wisdom in making these selections. Elect officers that will be active and a delegate that will attend the state meeting. Hope you will have a full attendance at this meeting. Select your program committee for 1926 and when they present the program those who are named should resolve that they will fulfill their assignment. Try to induce every regular physician in your county to become an active member before 1926. We must stand together—work together—forget our petty personal grievances—leave nothing undone that can be done to aid in placing Missouri where she belongs in the medical profession. This can be done if we have harmony, for with harmony we will have a united profession and a united profession cannot be headed off in a meritorious scrap. Dr. North and others are making a wonderful fight to make Missouri as clean as a "hound's tooth" in the medical world. We should show our appreciation of their work by giving them a 100 per cent. working membership. Get together for 1926!

Very truly yours,

G. S. CANNON,

Councilor Twenty-Second District.

MISCELLANY

BAKER STANDS FOR QUACKERY

Governor Baker has taken the final disgraceful step in his efforts to protect his friend, Dr. Enloe, and others charged with irregularities and improprieties in licensing unqualified applicants for medical licenses to practice in this State. He has demanded the resignation of all the members of the State Board of Health for the purpose of reorganizing it.

Let us thoroughly understand what this means. The majority of the present board has been trying to expose irregularities, which debase the medical standards of the State, and to punish those guilty of them. Doctors North and Stewart, president and secretary of the Board of Health, demanded the resignation of Dr. Enloe because of irregularities which occurred when he was secretary of the board. The charge of irregularities on Dr. Enloe's part was confirmed by the report of Dr. Waite, who made a survey of medical conditions in Missouri. Dr. Horton is now under charges of obtaining his license irregularly, and of receiving money from applicants for examination, for whom he said he could obtain licenses through his in-

fluence with a member of the board, mentioning Dr. Enloe.

The resignations of Drs. North and Stewart and other members of the board who are standing with them for the reform of the board are not demanded because they are guilty of any irregularity or impropriety or neglect of duty, but because they are trying to abolish irregularities, improprieties and all manner of crookedness in the licensing of physicians and to establish a high standard of qualification for medical practice. They are trying to protect life and health in the State from the practices of quacks.

It is a fair assumption, since Doctors North and Stewart and the majority of the board whose resignations are demanded are standing against irregularities, improprieties, corruption, that their retirement from the board will mean the whitewashing of all who have been charged with irregularity and impropriety, or worse offenses. The harmony which Governor Baker wants, it is fair to assume, is the kind of harmony that will be welcomed by all those who are violating the law and who want to profit by irregularity and low medical standards.

The scandal in the State Board of Health, aggravated by the attitude and action of Governor Baker with regard to it, is one of the most disquieting and disgraceful episodes in the history of the gubernatorial office of this State. Offices and agencies designed to safeguard the health of the people and their lives and to assure the licensing of only qualified physicians have become the spoils of unscrupulous politicians.—*St. Louis Post-Dispatch*.

REGISTRATION OF PHYSICIANS

The general registration of all physicians and surgeons of Kansas City, ordered by Dr. Herman E. Pearse, city health director, is a wise movement to correct defects, errors and general confusion which have long existed.

It is not a reflection in any sense on the rank and file of reputable and legitimate practitioners and none such need have any hesitancy in complying with a regulation which makes for his own protection and standing.

That the order is not regarded as any such reflection is evidenced by the fact that physicians and surgeons are registering in large numbers.

That there will remain a percentage of practitioners whose standing is not what it should be goes without saying. That will constitute a problem to be solved when it is presented.

There has been no revision of the official medical list for a long time. Hundreds of persons have been licensed to practice who have not been registered, yet who are amply entitled to practice. Others undoubtedly have crept in who are not equipped with adequate credentials and the registration will reveal the facts along this line.

A real registration of all physicians who are ministering to the ills of the community will show the facts and upon them future intelligent and effective action can be based.—*Kansas City Journal-Post*.

STERILE AMPULES MERCURIC POTASSIUM IODIDE, 0.017 Gm. ($\frac{1}{4}$ grain). A solution of potassium mercuric iodide obtained by dissolving red mercuric iodide 0.01 Gm., and potassium iodide, 0.01 Gm. in water, 1 C.c. Swan-Myers Co., Indianapolis (*Journal A. M. A.*, Dec. 6, 1924, p. 1847.)

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, FOR 1925

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID THE STATE ASSESSMENT FOR ALL
THEIR MEMBERS)

- Benton County Medical Society, October 10, 1924.
Chariton County Medical Society, December 20, 1924.
Camden County Medical Society, December 29, 1924.
Madison County Medical Society, January 21, 1925.
Montgomery County Medical Society, January 22, 1925.
Clark County Medical Society, January 30, 1925.
Cape Girardeau County Medical Society, February 10, 1925.
Dent County Medical Society, February 19, 1925.
Webster County Medical Society, February 26, 1925.
Ste. Genevieve County Medical Society, March 24, 1925.
Ralls County Medical Society, April 2, 1925.
Caldwell County Medical Society, April 4, 1925.
Taney County Medical Society, April 6, 1925.
Christian County Medical Society, April 15, 1925.
Monroe County Medical Society, April 20, 1925.
Cooper County Medical Society, April 28, 1925.
Morgan County Medical Society, May 7, 1925.
Laclede County Medical Society, May 29, 1925.
Scott County Medical Society, June 20, 1925.
DeKalb County Medical Society, July 21, 1925.
Carter-Shannon County Medical Society, August 24, 1925.
Ray County Medical Society, August 28, 1925.
Platte County Medical Society, September 21, 1925.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

One Hundred and Thirteenth Meeting, May 11, 1925

1. PHYSIOLOGICAL PRINCIPLES IN HELIO THERAPY.—By DR. S. E. POND.

The success of heliotherapy depends upon certain phenomena which are essentially related to the functioning of normal protoplasm together with certain physical and chemical factors which have too often been overlooked in practice. Living cells and tissues respond to definite changes of intensity of incident light energy irrespective of source and without particular regard for cellular organization if the energy is transformed at a rapid enough rate within the cells comprising the area radiated. That is, certain cells absorb light energy in the visible region, for example, the retinal layer, which provide visual phenomena; pigmented areas, i. e., the dark skin, absorb and transform into heat much of all incident radiation; unpigmented skin may be light sensitive (and this is true of most tissues) if the

calcium content is lowered in proportion to sodium; or if some dye which absorbs the incident radiation and undergoes a photochemical change is added to the tissues at the time of radiation. Thus eosin, injected subcutaneously, or hematoporphyrin, or fluorescein, and subsequent exposure to sunlight or ultra-violet sources, of suitable intensity, will effect destruction of stained cells which otherwise would have been undisturbed by the light only or by the stain in the dark. Hence any physical source may be used if energy is emitted in the region which will be absorbed by the tissues in suitable quantity. It is absorption by the tissues together with an essential change into chemical energy rather than into heat which provides most important reactions of significance to the heliotherapist. Too low intensity will have no specific local effect, irrespective of time applied, because of a cell or tissue threshold. Most specific reactions are dependent upon a change in definite components of the tissues. For example, a general light-sensitivity is effected in muscles if they are immersed in calcium free solution, and muscles in isotonic sodium chloride solutions with sudden intense exposure to light will show response. Low calcium content provides such sensitization and high calcium content tends to reduce light effects. Another change of physiological importance is the marked acid reaction of proteins exposed to light for they become acid-proteins, swell and dissolve. Internal molecular changes are evoked by strong light absorbed by tissues whose proteins contain certain amino acids, such as tyrosine and tryptophane. They absorb light energy chiefly in the ultra-violet region and hence sources abundant in the ultra-violet like the quartz lamp are of chief importance. Sugars are oxidized by the still shorter wave-length ultra-violet. The significance of such information is that we must be careful to work out specific reactions which are essential to therapy and in such cases be certain that the depth of penetration and the source and intensity employed are sufficient to transform the energy at a sufficiently rapid rate. The host of general reactions which may be attributed to localized heat by rapid transformation of light energy into heat energy have not been studied with care. We are only certain that in the protoplasmic changes there is first of all a production of some substance or factor by photochemical action and second, a chemical reaction which is, in contrast to the first, increased in rate by any temperature elevation. This is why the two ends of the sun's spectrum, the infra red and ultra violet, often are considered to have opposite effects, whereas the infra red tends to be rapidly transformed into heat and to accelerate the chemical reaction set-up by the ultra-violet proper.

In such treatments as that of lupus two reactions are required, first an intense absorption of wave lengths by the surface area destructive to the tubercle bacilli, and second, a general light absorption to stimulate better local circulation. The second factor may be of far greater importance than we are aware since light energy transformed in the skin and in the blood or lymph appears to set up indirectly (or facilitate) other chemical reactions of great physiological value. The mystery of the sunlight cure of rickets appears to be wrapped up in such general or indirect reactions, since calcifying zones exposed to direct ultra-violet exhibit local decalcification.

2. INDICATIONS FOR HELIOTHERAPY.—By DR. F. H. EWERHARDT.

The use of ultra-violet radiation has been tremendously popularized during the last two years by the manufacturers. This has caused this mode of treatment to be placed in the hands of many who are incompetent and enter in it purely for commercial gain. Others, honest, well-meaning physicians, but who do not understand its proper technique, soon discard the lamp and become prejudiced against its use. On the other hand, there are many men who have conservatively used the light for two and more years and report many successes as well as failures. After weighing all the evidence pro and con, one must come to this conclusion: That beyond the shadow of a doubt the proper use of the ultra-violet ray in indicated cases produces a definite beneficial result; that its failures have been due largely to haphazard and gunshot technique and to over-enthusiasm on the part of the practitioner, the result of clever salesmanship.

The clinician is in great need of data collected from the physiological laboratory, such as has been so ably presented to us by Dr. Pond this evening. With such facts, together with accumulated clinical experience there can be no doubt but that in a very short time the use of ultra-violet radiation will be placed on a thoroughly rational basis.

So far as we know, the principal therapeutic effects of the air-cooled lamp radiation is its biochemical action on general metabolism. It is indicated in such conditions as rickets, malnutrition, anemias and allied conditions. It very definitely raises the calcium content of the blood. It is useful in all forms of tuberculosis, excepting possibly pulmonary, which latter phase is being much discussed at the present time. The surgeon uses it in postoperative osteomyelitis, arthritis, ulcers, postoperative wounds, carbuncles and sinus infections. It has proven efficacious in pruritis ani and vulvae. It is claimed a specific in erysipelas, has been found useful in shrinking tonsils, in pyorrhea, Vincent's angina, acne, eczema, psoriasis and certain other forms of dermatoses. In the latter cases where especially germicidal effect is desired, the water cooled lamp is more effective than the air cooled.

3. CLINICAL VALUE OF HELIOTHERAPY.—By DR. J. J. SINGER.

Following the reports of Rollier on the value of heliotherapy as used in the mountains of Switzerland, considerable interest in this subject has been aroused. The results that he has obtained by the use of natural sunlight in increasing doses have been miraculous. Many cases of tuberculosis of the bone, bowels, and glands which formerly were considered suitable for operations, now are completely cured by the use of the sun's rays.

In this country a large amount of work along this line has been done at the Adam's Memorial Hospital at Perrysberg, N. Y. Similar results have been obtained at our own Ridge Farm in St. Louis County.

There has been considerable controversy as to whether artificial heliotherapy approaches natural heliotherapy. It can readily be seen that in the natural heliotherapy many types of ray can be obtained, while in the artificial only ultra-violet.

This might explain the greater benefits derived from the former, for it is reasonable to suppose that rays other than the ultra-violet could be responsible for these better results. A large number of workers consider that infra-red rays are the beneficent factor in natural heliotherapy.

Rollier in his original work and subsequent articles does not claim any great benefits of heliotherapy for pulmonary tuberculosis, but leaves one to infer that this condition could be treated in the same way that he treats surgical tuberculosis cases. LoGrasso, who is now in charge of instruction at Perrysberg, has reported that fifty cases were treated with excellent results. Since then McCutcheon at the Pennsylvania State Sanatorium reports one hundred and five cases with considerable improvement, and Bronfin, at Denver, reports fifty cases with only slight improvement.

The exact manner in which the rays are effective is not known, but one must admit great results clinically. The artificial lamp has been used by Dr. Mayer at Saranac Lake with fair results. The interesting observation has been made by Schroeder as far back as 1914 that respiration is deepened, alveolar carbon dioxide tension reduced and skin capillaries dilated. Bronfin suggests that the action of the sun's rays is not unlike tuberculin. Schroeder also suggests that the symptoms developing from an over dose of the sun's rays simulate tuberculin.

In our work at the Barnes Hospital we have used the lamp in action rather consistently to the sun's rays in surgical lung lesions and have found splendid results, that is, hastened healing of the wound, rendering less putrid, and general effects on patients excellent.

4. HELIOTHERAPY IN CHILDREN.—By DR. HUGH McCULLOCH.

Just a few remarks in regard to the treatment of children at Ridge Farm by direct exposure to the sun: Our results so far are purely clinical and have not received a highly technical interpretation. Certain difficulties which we have there, keep light conditions from being constant. Our children are exposed to sunlight, but the degree of exposure in the individual child and the amount of sunlight available are of variable quantities.

In the first place I wish to draw attention to another factor in regard to the clinical application of heliotherapy, that is, its effect on metabolism as a whole. These children are exposed to the sunlight, and to provide this exposure they are placed in the open air. This results in a marked loss of body heat. They are exposed on cool days, that to us feel quite uncomfortable, and yet they lie there apparently comfortable without any clothes. Thus the body must radiate and lose a lot of heat. Their skin is perfectly warm, yet my own skin at the same time is cold. This must, then, have a marked effect on the body as a whole. It accounts in part for the tremendous amount of food taken in by the children under these conditions.

The second point is the marked variation which different individuals show to exposure. It is often a matter of complexion—certain children reacting differently according to complexion. There is a decided difference between the effect on a blonde or a brunette. The blondes must be exposed for a brief time, else they get a severe burn, while the brunette can be put in the full

sunlight without bad effect. The effects vary in individual cases. Some children show very quick signs of heat stroke in sunlight. They are attacked with vomiting in the more severe spells. We see at Ridge Farm a great many children who have tuberculosis and note how they react as compared with those who do not. I cannot see a difference between the child who has and one who has not, in the way that they react to sunlight.

There is another point on which I would like to get some expression and that is the particular conditions which produce reaction in a child itself. They go on sometimes for 6 months without any sign of improvement. Later they react more normally to exposure to the light and afterwards improve. Recently we had a child who was exposed to light for 6 months, as much as we could give him under conditions similar to the others and he showed no signs of improvement at all. After a definite length of time, however, this child received several blood transfusions for an anemia and his hemoglobin became normal. Since that time his improvement has continued and his reaction to light has been normal.

Another fact which I have observed is the marked effect of exposure to light. In the past it was the custom to put the legs of children with tuberculosis of the hips and knees in plaster or in extension whereby the whole leg was encased. When that leg was taken down it was fairly straight but we expected to have a certain degree of atrophy. About a year ago this method was changed so that a tuberculous leg is not now encased in plaster. It is held in extension by a cuff at the ankle and at the knee. The legs which have been so treated have not shown any atrophy and have been as the leg that is free. The increased and freer use of the leg does not explain the difference in effect.

BOONE COUNTY MEDICAL SOCIETY

Annual Inter-County Meeting

At the annual Inter-County meeting of the Boone County Medical Society held at Columbia, June 10, the following program was given at McAlester Hall:

Demonstration of Case of Aneurysm of Carotid Artery. By Drs. Arthur R. McComas, Sturgeon, and Dudley A. Robnett, Columbia.

The Value of Polymorphonuclear Leucocytosis or Neutrophilia, in Acute Appendicitis. By Dr. Dudley A. Robnett, Columbia.

Status-Thymico-Lymphaticus. By Dr. M. Pinson Neal, Columbia.

Demonstration of Gross Pathological Materials. By Drs. M. Pinson Neal, Columbia, and Dudley A. Robnett, Columbia.

The following members residing in Columbia, registered for the meeting: Drs. E. D. Baskett, W. E. Beldon, Dudley S. Conley, J. W. Connaway, W. P. Dysart, W. O. Fischer, James Gordon, A. W. Kampschmidt, C. L. Lavender, H. P. Muir, M. P. Neal, F. G. Nifong, W. A. Norris, G. L. Noyes, D. A. Robnett, W. R. Shaefer, Lloyd Simpson, C. M. Sneed, D. G. Stine, J. E. Thornton.

The following members and visitors registered from their respective towns: Drs. E. N. Gentry, A. R. McComas, Sturgeon; R. H. Simpson, St. Louis; J. E. Parmer, McFall; G. D. McCall, C. H. Christian, A. D. Ferguson, R. N. Crews, Fulton; W. H. Williamson, Mokane; E. McD. Rusk, New Bloomfield; F. C. Suggett, Ashland; D. A. Barnhart, Huntsville; F. L. McCormick, Moss R. Noland,

M. E. Leusley, Moberly; E. F. Yancev, W. J. Ferguson, Sedalia; J. F. Potts, P. E. Williams, Boonville; M. S. McGuire, Arrow Rock; T. C. Richards, S. W. Downing, Fayette; A. L. Meredith, Prairie Home; R. R. Robinson, Hallsville.

The meeting was concluded by a dinner served by the members of the Boone County Medical Society at 6:30 p. m. at the Columbia Country Club.

W. O. FISCHER, M.D., Secretary.

CALDWELL COUNTY MEDICAL SOCIETY

The Caldwell County Medical Society met in Polo, July 23, in the Methodist Episcopal Church, at 2 p. m. Preceding the meeting a picnic was held in the Church grove and a delicious spread was served by the wives of the doctors. Members present were: Drs. B. F. Carr, T. W. Scanlon, J. E. Gartside, C. H. Wilbur, Polo; G. S. Dowell, Braymer; W. S. Shouse, Kingston; Tinsley Brown, Hamilton. Visitors: Drs. M. A. Hanna and C. C. Dennie, of Kansas City; A. J. Simpson, Chillicothe; Austin Carr, of Polo; Spence Redman, Platte City, Councilor of the 12th District.

The minutes of the meeting held at Braymer, June 26, were read and approved. The privileges of the society were extended to the visitors.

Dr. Redman gave an extended talk as Councilor on the advantages of county medical societies in the way of a help not only to the members but to the citizens in promoting sanitation and health.

Dr. Dennie addressed the society on the treatment of poisons by arsenic, mercury and lead by the use of hypophosphite of soda.

A case of psoriasis was examined by Dr. Dennie and discussed.

Dr. Hanna read a paper on prenatal care which was discussed by Drs. Redman, Austin Carr, B. F. Carr, Brown and Dowell.

The society is deeply grateful to Drs. Hanna and Dennie for addressing the society on such interesting and instructive subjects.

The society adjourned to meet in Kingston the third Thursday in August.

TINSLEY BROWN, M.D., Secretary.

CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society met in Kearney, September 3, at high noon, opening with a basket dinner in which members and wives participated. Country ham, fried chicken, angel-food cake, hundred per cent. lemonade—in fact everything that tickles the palate or sticks to the ribs was spread upon improvised tables on the lawn of the Baptist Church near the center of town. Our Ladies Auxiliary held their business meeting, re-electing all officers of the past year. The utmost harmony and fraternal feeling prevailed throughout. Visiting this meeting were Doctors Dimond and Ducommon, of Excelsior Springs.

The scientific session was a symposium on rectal diseases, which all considered a neglected branch of practice. All sorts of instruments were exhibited, old and new, some to approve and some to condemn. The fact was brought out that the advertising "rectal shark" is the logical result of indifference of the profession toward rectal pathology and treatment.

An important resolution was unanimously adopted at this meeting, a copy of which is submitted for publication in THE JOURNAL, that other county societies may be led to declare their sentiments for higher medical qualifications and present them to the profession at large. The resolution follows:

WHEREAS, The Clay County Medical Society, an organization of the regular medical profession, whose object is to maintain the high educational and moral standard of the profession, to restrict the privilege of practicing the profession of medicine to qualified graduates of reputable medical colleges, and to stimulate medical research and protect the health of the community in which we reside, and

WHEREAS, We feel that the high standard to which we aspire is being trampled in the dust, that the standard of medical education is being bartered, that the high standard of the State Board of Health has been wallowing in the mire of petty politics for personal gain, therefore, be it

Resolved, First. That we endorse the recent investigation and report of Dr. Frederick C. Waite, of Cleveland, Ohio. Second. That we endorse the action of Dr. Emmett P. North, President of the State Board of Health, Dr. James Stewart, Secretary, and Dr. Wilcoxen, a member of the Board. Third. That we commend the Kansas City *Journal-Post* and the St. Louis *Star* in their exposure of the medical diploma mills and the uncanny methods attributed to Dr. Cortez F. Enloe, former Secretary of the State Board of Health. Fourth. That we condemn the special privileges and back-door methods granted to applicants for license to practice medicine, as is said to have been done by Dr. Cortez F. Enloe, the former Secretary of the State Board of Health. Fifth. That we condemn the action of Governor Baker in paying his political debts at the cost of the sick and afflicted of the State. Sixth. That we condemn the attitude of Governor Baker in retaining Dr. Cortez F. Enloe as a member of the State Board of Health. Seventh. That a copy of these resolutions become a part of the minutes of this meeting. That a copy be sent to the Governor and the Secretary of the State Board of Health, and a copy to the Kansas City *Journal-Post*, the St. Louis *Star*, and the Missouri State Medical Journal.

J. E. BAIRD, M.D., President.

J. J. GAINES, M.D., Secretary.

HENRY COUNTY MEDICAL SOCIETY

The Henry County Medical Society met at the Y. M. C. A. Building in Clinton, August 27.

Besides the President, Dr. R. D. Haire, the following members were present: Dr. Walter E. Baggerly, Ladue; Dr. C. W. Head, Windsor; Dr. D. A. Pollard, Calhoun; Drs. J. G. Beaty, S. W. Woltzen, G. S. Walker, S. A. Poage and Ed. C. Peclor, Clinton. Visitor, Dr. C. F. Howard, Deepwater.

This being a clinical meeting, a number of interesting cases were discussed.

Arrangements were made for a meeting to be held on October 29, to which the physicians of the neighboring counties will be invited. Good speakers will be asked to attend and the session will be followed by a banquet in the evening.

ED. C. PEELOR, M.D.,
Secretary.

SCOTT COUNTY MEDICAL SOCIETY

Scott County Medical Society met in regular session October 18 in the Courthouse at Benton.

A reasonable number of enthusiastic members was present and a good meeting was had.

Dr. E. J. Nienstedt, of Blodgett, read an interesting paper on diabetes mellitus and gave an interesting report on his experience in the use of Iletin in four cases.

Dr. U. P. Haw, of Benton, reported a case of leprosy, this being the first and only case in this county. We are sorry to note that the patient made his escape to the mountains of Kentucky or Tennessee before he could be apprehended by the federal authorities.

Dr. G. S. Cannon, of Fornielt, gave a case report and a good account of his experience with pertussis vaccine giving several good points to be observed in treatment and prevention of whooping cough.

Each of these reports brought out able discussions from those present and we all enjoyed the meeting very much.

Our next meeting will be held at Sikeston in November where we hope to arouse a little of the spirit of organization among the local physicians and we hope to have the State Association President with us.

SYLVESTER DOGGETT, M.D., Secretary.

ST. LOUIS COUNTY MEDICAL SOCIETY

The regular meeting of the St. Louis County Medical Society was called to order at 3 p. m. Wednesday afternoon Sept. 9, 1925, in the Directors' room of the Webster Groves Trust Co., at Webster Groves.

The president, Dr. Otto W. Koch, was in the chair. Dr. L. R. Main, D.D.S., St. Louis, who had been invited to speak to us, was present and upon motion of Dr. Dyer, seconded by Dr. O'Malley, the regular order of business was suspended and Dr. Main spoke upon the subject of "Radiographic Evidence of Dental Disturbances of Interest to the General Practitioner." A number of pictures thrown on the screen gave emphasis to his talk and added very much to the value of his paper. Discussion and questions by Drs. Walters, Dyer, J. A. Townsend and Armstrong followed.

On motion by Dr. O'Malley, seconded by Dr. J. A. Townsend, a rising vote of thanks was extended to Dr. Main.

The minutes of the May and June meetings were read and approved.

As no member of the membership committee was present, and after much discussion, action upon the names of Drs. C. A. Poe and A. C. Hofsommer was deferred until the next meeting, and the secretary was instructed to notify the absent committee to be sure and report.

It was moved by Dr. Denny and seconded by Dr. Armstrong that the resignation of Dr. H. F. Lucking, who has gone into the Army Medical Corps, be accepted as of January 1, 1925. Carried.

The report of Dr. J. A. Armstrong, delegate to the Missouri State Medical Meeting at Kansas City, was given. Remarks by Dr. Otto Koch who was also in attendance at the meeting. Much interest was shown in the 1926 meeting which will be held in St. Louis.

The President, Dr. Koch, announced the bereavement of Dr. Sudduth, of Clayton, by the death of his wife. Drs. Koch and Dyer attended the funeral. A message of condolence was ordered sent by the secretary to Dr. Sudduth.

Dr. J. A. Armstrong presented a clinical case of gallstones which were clearly shown in the radiographic pictures and upon operation the gallbladder and stones and sand were removed. The specimen was opened before the society and the viewing of the pictures.

Dr. J. A. Townsend announced a splendid new road open to House Springs and invited the Society to meet at his house at the October meeting.

It was moved by Dr. Dyer and seconded by Armstrong that the invitation be accepted. Carried.

Members present: Drs. Armstrong, O'Malley, Koch, Corley, Dyer, J. A. Townsend, Walters, Schudde, Denny. Visitors, Dr. L. R. Main, D.D.S., St. Louis; Dr. Barto, of the St. Louis City Society.

CLYDE P. DYER, Secretary-Treasurer.

WRIGHT-DOUGLAS COUNTY MEDICAL SOCIETY

The Wright-Douglas County Medical Society met in the Masonic hall at Ava, Thursday, August 6, at 2:30 p. m. with the following members and visitors present; J. L. Gentry and R. M. Norman, of Ava; R. A. Ryan, of Norwood; J. R. Davis, of Noble; A. C. Ames, of Mountain Grove; Jas. D. James, of Springfield; Marvin Gentry, of Ava, a medical student.

The president and vice-president both being absent, Dr. Ames called the meeting to order and asked Dr. Norman to preside.

The minutes of the last meeting were read and approved and also several letters from the state secretary were read.

Dr. Gentry presented as a clinic a case of Dr. Ferguson, a little girl with obscure symptoms of an epileptic nature though not a well marked case.

Dr. James read a paper on maternal welfare and prenatal care which contained many valuable points. The clinical case and Dr. James' paper were quite fully discussed by those present.

The meeting adjourned at 4:30 p. m. to meet at Mansfield, November 5, for the annual election of officers.

A. C. AMES, M.D., Secretary.

WOMAN'S AUXILIARY

THE WOMAN'S AUXILIARY TO THE MISSOURI STATE MEDICAL ASSOCIATION

OFFICERS AND COMMITTEES

President, Mrs. M. P. Overholser, Harrisonville.
Chairman of Organization, Mrs. Willard Bartlett, 53 Westmoreland Place, Saint Louis.

Corresponding Secretary, Mrs. J. G. Montgomery, 524 Knickerbocker, Kansas City.

Recording Secretary, Mrs. A. B. McGlothlan, 821 North 24th Street, St. Joseph.

Treasurer, Mrs. C. T. Ryland, Lexington.

Chairman of Education, Mrs. E. T. Gibson, 6425 Wornall Road, Kansas City.

Education Subchairmen: Hygeia, Mrs. D. S. Long, Harrisonville; University Extension Service, Mrs. Guy L. Noyes, Columbia; Chairman of Legislation, Mrs. George E. Bellows, 3239 Euclid Avenue, Kansas City; Chairman of Finance, Mrs. John C. Parrish, Vandalia.

TO INCREASE HYGIEIA SUBSCRIPTIONS

Harrisonville, Mo., August 20, 1925.

To the Members of the Woman's Auxiliary:

At the meeting of the American Medical Association and the Woman's Auxiliary held in Atlantic City this past June, it was agreed that there was no more important work for the Woman's Auxiliary than to disseminate health information through the columns of *Hygeia*.

When we consider that Missouri has only about 743 *Hygeia* subscribers, placing her 29th among the states on the *Hygeia* subscription list, we realize that there is work for the women of Missouri to do.

In view of the fact that all of the physicians of Missouri are not subscribers to *Hygeia* let us first aim to place that magazine on individual and community health in the home or office of every reputable physician. Then, if we can secure one lay subscription for every subscription by a physician we shall be able to increase our *Hygeia* circulation creditably and extend its gospel of health greatly.

This is a definite challenge, women of Missouri. Let us work together for the accomplishment of this aim. Let us have a part in making this wonderful state, in the heart of America, the most healthful spot in the world.

MRS. DAVID S. LONG,
State Chairman of Hygeia.

Cass County Auxiliary

The Woman's Auxiliary to the Cass County Medical Society held its annual business meeting at the home of Mrs. M. P. Overholser in Harrisonville on Thursday afternoon, June 11.

Among the business transacted was the election of the following officers: Mrs. A. H. Baldwin, of Pleasant Hill, president; Mrs. T. W. Adair, of Archie, vice-president; Mrs. R. M. Miller, of Belton, secretary, and Mrs. J. S. Triplett, of Harrisonville, treasurer.

Mesdames Baldwin and Overholser gave very interesting reports of the state meeting that was held in Kansas City in May. Four new members were enrolled, Mrs. H. S. Crawford, of Kansas City, Mrs. G. F. Kelly and Mrs. B. L. Phillips, of Drexel, and Mrs. Dora Johnson, of Harrisonville. This makes an entire membership of twenty-two. Mrs. Harry F. Parker, president of the Johnson County Auxiliary and seven Johnson county members, also Mrs. Walton, of Windsor, and Mrs. L. L. Smith, of Urich, were guests of the association.

After the business session the ladies, in connection with the Cass County Medical Society, enjoyed a picnic supper on the Overholser lawn the lunch having been prepared by the Ladies Auxiliary. About 60 people partook of this bounteous feast. Mrs. R. M. Miller, of Belton, had prepared the birthday cake, and its lone candle proclaimed to all the fact the Auxiliary was one year old.

Both organizations received a cordial invitation from Dr. and Mrs. A. H. Baldwin, of Pleasant Hill, to hold their next meeting, which will be in September, at Baldwin Lake in Pleasant Hill. The invitation was accepted.

Notes

The Lafayette County Woman's Auxiliary, in the place of its August meeting, promoted five free clinics for children in as many different parts of the county.

The appeal for the extension of the circulation of *Hygeia* has met a fine response in several counties.

The Buchanan County Auxiliary is placing the magazine in every rural school (60 in number) of that county.

The Cass County Auxiliary offers a prize of \$10.00 for the best paper by a teacher in the county on "How I Use *Hygeia* in My Teaching."

The Saline County Auxiliary has organized a campaign to see that every member of the Saline County Medical Society has *Hygeia* in his office. Their county health officer, Dr. Kennedy, will distribute copies of *Hygeia* and recommend it to the schools when making his examinations. A canvass of all county schools will be made by the Auxiliary, each member being assigned a block of schools for which she agrees to be responsible.

BOOK REVIEWS

COMMON INFECTIONS OF THE FEMALE URETHRA AND CERVIX. By Frank Kidd, M.A., M.Ch., F.R.C.S., and A. Malcolm Simpson, B.A., M.B., D.P.H. With additional chapters by George T. Western, M.D., and M. S. Mayou, F.R.C.S. Oxford University Press, 35 W. 32d St., New York City. 1925. Price \$2.50.

This monograph sets out in a very clear fashion the development of the system by which the authors have succeeded in bringing from a rather chaotic and unsatisfactory mixed clinic at the London Hospital Out-Patient, a very satisfactory teaching clinic in which the venereal diseases of female patients have been classified and standardized into one great service.

Dr. Kidd is very frank in his criticism both of technic and therapy as taught and practiced by his predecessors. The Sims position he calls the "curse of gynecology." This is an innovation as we remember delivery in the left lateral decubitus has been a favorite posture with British obstetricians. Kidd places the patient on her back with knees wide spread and depends on the light of a head lamp for his exploration.

He claims that by following his methods gonorrhea in the woman is more easily cured than in male subjects. The service has been in existence for five years and the department is now a flourishing institution.

Sixty per cent. of leucorrhea were found to be non-gonorrheal and these were sent to the gynecological wards.

All cases are tested for both diagnosis and care through the combination of the bacteriological methods of Dr. Western of the London Hospital.

The little book is a convincing presentation of a vexing question and will doubtless have a deservedly large sale.

G. C. M.

PHYSICAL DIAGNOSIS OF DISEASES OF THE CHEST. By Joseph H. Pratt, A.M., M.D., and George E. Bushnell, Ph.D., M.D. Philadelphia and London. W. B. Saunders Company. 1925. Price. \$5.00.

It is refreshing to find a volume on physical diagnosis of the lungs and heart in which is emphasized the importance and value of use of the senses of sight, feeling, and hearing, and the insistence that upon this use should depend the major portion of the conclusions reached in examining a chest. Such is the volume under consideration.

It is the outcome of the experience of the writers with classes of supposedly trained physicians in the Training Camps during the World War, which led them to conclude that many physicians previously poorly equipped by the schools in this regard developed not only an insight into but unexpected facility in a subject previously unattractive for want of proper training.

The fundamental importance of a knowledge of the normal chest, and of the physics and physiology of the phenomena encountered have been given foremost attention, after which and on the basis of which the consequences of pathological changes are considered. It is recommended that the student familiarizes himself with the ordinary phenomena in health before being brought to face pathological conditions, and the refinements of unusual conditions and of special methods. If the latter be introduced before a firm grasp is had with ordinary fundamental ob-

servations, the student may never learn to estimate the value of new, doubtful, or untested methods.

This volume presents a much needed reversion to the simpler methods in diagnosis and is well worthy of widespread attention.

W. B.

ENERGETIQUE CLINIQUE. Physiopathologie. Therapeutique. Par A. Martinet. Ouvrage public par les soins Dr. Martingay. 1 volume de 416 pages avec 104 figures. Masson et Cie, editeurs, 120 Boulevard, St. Germain, Paris, VIe, France. Prix 35 fr.

The remarkable success in the United States of Martinet's two works already translated into English makes this volume of considerable interest. It is a discussion of the theory of medicine in so far as it is connected with the nervous system. This volume would please greatly the engineer who wrote in the March "Atlantic" an article entitled "An Engineer's View of Medicine," because he seeks a philosophy rather than the presentation of a detailed study of facts.

The subjects considered are: The sympathetic nervous system; the vagus; the reflexes due to the vegetative nervous system. In other words, it is a study of sympathicotonia, vagotonia, and amphytonia. More than this, it goes into a mathematical discussion of bodily energy and the energizing forces.

One of the most practical chapters is that on Basedow's disease (Graves' disease, exophthalmic goiter). This goes into discussion of the basal metabolic rate, for which the author quotes chiefly American writers (naturally only to 1922).

Another valuable feature is the illustrations, some of them in color, showing the anatomy of the nervous system, and the curves showing the influence of drugs on the nervous system.

This book will be hailed with appreciation when it comes out in English.

G. H. H.

OEUVRES DE PASTEUR. Reunies par le Dr. Pasteur Vallery Radot. 1 vol. de VII-519 pages avec 32 planches gravees en taille-douce et 25 gravures en noir. Paris. Masson et Cie, Editeurs. Prix 100 fr.

A collected edition of the works of Pasteur has not, so far as I know, previously been made. No mention is made of any such collection in the bibliographical notes at the end of the sketch of Pasteur in the Encyclopedia Britannica and Garrison's "History of Medicine" makes note only of individual papers and their dates. In connection with some work in medical history I endeavored five years ago to obtain a collected edition either in French, German or English at two of the most complete of American medical libraries, without success. This edition under the direction, presumably, of Pasteur's grandson, is therefore of first rate importance to students.

The third volume contains the beginning of his bacteriologic work, the studies on acetic fermentation published in 1861 and the studies on the maladies of wine in 1866. The researches he had accomplished up to that time, on the forms of crystallization of the tartaric acids had not only given him a high place in the chemical world but had prepared his mind, as perhaps nothing else could have done for the investigation of fermentation. He had found that a certain form of fermentation occurred in a solution of tartaric acid which destroyed the dextro-rotary crystals and even stated that this was the best and simplest way to obtain a pure solution of laevo-tartaric acid. "Why," he asked, "does the

dextro-tartaric acid alone become putrefied? Because the ferments of that fermentation feed more easily on the right than on the left molecules." When, therefore, he was called upon to help the manufacturers of wine and vinegar his mind was prepared to believe in ferments which were specific for certain actions. In studying vinegar fermentation he found that vinegar was prepared by allowing casks of wine to stand open. The film which developed on the surface he found was necessary to the process. When this film was removed or broken up the fermentation was slowed. This film he discovered to be made up of an organism known as *Mycoderma aceti*, and with the establishment of that fact modern bacteriology was born.

It remains for some enterprising publisher to bring out an edition of the collected works of Pasteur in English translation. There is hardly available anywhere even a fairly long excerpt in English from any of the studies on vinegar fermentation, the diseases of the wine, chicken cholera, anthrax or even hydrophobia. And considering that these constitute probably the greatest single contribution of biologic science to the human race, it would seem at least an act of justice to undertake such a task. L. C.

PSEUDO-APPENDICITIS. A Study of Mechanical Syndromes of the Right Lower Quadrant Simulating Appendicitis. By Thierry de Martel, Chirurgien des Hopitaux de Paris, and Edouard Antoine, Médecin des Hopitaux de Paris. Authorized translation from the French by James A. Evans, A.B., M.D. Preface by R. Bensuade, Médecin des Hopitaux. Cloth. Price \$3 net. Pp. 211, with 41 illustrations. Philadelphia. F. A. Davis Company. 1925.

This book of 200 pages is a very commendable study of the various causes of pain in the right lower quadrant. There is no other symptom in abdominal diseases more urgently demanding a careful study.

Few abdominal surgeons will agree with many of the conclusions reached, for the author drag forth for parade the various membranes and kinks long discarded in this country; but, nevertheless, there is food for thought in every page. Everyone interested in clinical medicine will gain by a reading of the book. A. E. H.

DISEASES OF THE EAR, NOSE AND THROAT. By Harold Hays, M.A., M.D., F.A.C.S. Associate Otolaryngologist, City Hospital, Adjunct Physician Riverside Hospital; Consulting Otolaryngologist Sing Sing Prison, and Sanitarium for Hebrew Children, etc. Philadelphia. F. A. Davis Company. 1925. Illustrated. Price \$10.00.

This book is highly commended throughout because it contains the essentials of ear, nose and Throat anatomy, pathology, diagnosis and treatment, together with operative technique unfolded to the reader in logical sequence. The writer has endeavored to produce a textbook for beginners and practitioners that contains the essentials of the specialty, omitting in a large measure, that mass of material found in the usual textbook on Otolaryngology which serves to contribute to their volume rather than to their value.

The illustrations, consisting of half tone and line engravings, together with fifty-five full page colored plates, are excellent, and in themselves constitute a graphic picture of this specialty. The text deals with only such material as has been, to the author's mind, tried and proven. It is not only of value to

the beginner and general practitioner because of its directness and simple thoroughness, but it is of value to the specialist because it represents a modern and up to date survey of his work in all departments. I. D. K.

CLINICAL FEATURES OF HEART DISEASE. An Interpretation of the Mechanics of Diagnosis for Practitioners. By Leroy Crummer, M.D., Professor of Medicine, University of Nebraska. Introduction by Emanuel Libman, M.D., Professor of Clinical Medicine, Columbia University, New York. Paul B. Hoeber, Inc. New York. 1925. Price \$3.00.

This book is carefully written and contains the best in modern thought and teaching both in this country and abroad. It stresses the fact that the symptoms which the patient complains of must be considered in making a true diagnosis of heart disease as well as a prognosis. The book is the result of vast clinical experience in private and military practice and makes a valuable reference work for the matured clinician as well as for the young practitioner. It is a veritable storehouse of information concerning the puzzling questions which arise daily in dealing with diseases of the heart. A. M. G.

INFECTIONS OF THE HAND. A Guide to the Surgical Treatment of Acute and Chronic Suppurative Processes in the Fingers, Hand and Forearm. By Allen B. Kanavel, M.D., Professor of Surgery, Northwestern University Medical School; Attending Surgeon, Wesley Memorial Hospital, Chicago. Fifth Edition, Thoroughly Revised. Lea & Febiger. Philadelphia and New York. 1925. Price \$2.50.

It is pleasing to note that this book, one of the noteworthy medical books of recent years, has been sufficiently well recognized to call for five editions. The author has added to a most extensive first-hand knowledge of the hand a wide clinical experience in the handling of the infections which so commonly affect it.

There is no book so indispensable as this one. A. E. H.

L'ANNÉE THÉRAPEUTIQUE. Médications et Procédés Nouveaux. Par Le Dr. L. Cheinisse. Cinquième Année, 1924. Masson et Cie, éditeurs. Libraires de l'Académie de Médecine, 120 Boulevard Saint-Germain, Paris, VIe, France. 1925. Prix 8 fr.

This is a little brochure of 186 pages, discussing the suggestions of the year along therapeutic lines. In America, most of such suggestions are furnished by the quarterly or monthly journals or by the various pharmaceutical houses. For there seems to be a tendency among the French to admit to standard publications material which has not yet passed the examinations of such authorities as those furnished in our own Council on Chemistry. G. H. H.

MEDICAL AND SURGICAL REPORT OF THE ROOSEVELT HOSPITAL, New York. Second Series, 1925. Based on the Work of the Years 1915-1924, Inclusive. Paul B. Hoeber, Inc., Publishers, New York. 1925. Price \$5.00.

This book is rather a collection of papers from various members of the hospital staff than a report of the hospital. It is none the less meritorious, however. The papers are all of a high order and well worth a study. A. E. H.

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies
Issued Monthly under direction of the Publication Committee

VOLUME XXII

NOVEMBER, 1925

NUMBER 11

E. J. GOODWIN, M. D., EDITOR
901 Missouri Building, St. Louis, Mo.

PUBLICATION { W. H. BREUER, M.D., Chairman
COMMITTEE { C. B. FRANCISCO, M.D.
M. A. BLISS, M.D.

ORIGINAL ARTICLES

TRAUMATIC FRACTURES OF THE VERTEBRAL COLUMN

A RADIOGRAPHIC ANALYSIS OF A SERIES*

SHERWOOD MOORE, M.D.

ST. LOUIS

In considering disease or injury of the spinal column, it would seem that a few elementary facts regarding its function are not sufficiently kept in mind. This structure has a three-fold function: It houses the spinal cord and its appendages; it is the basis about which all voluntary muscular action centers; and it transmits stresses. The first of these is quite, if not entirely, a passive part; the second is active with periods of relative passivity; while the third is unceasing. Due to the latter two, it follows that structural impairment in such an active part of the organism is fraught with serious consequences for the whole. It is because this appears to be insufficiently recognized that it is mentioned by way of introduction to an analysis of a series of traumatic fractures of the vertebral column.

The spinal column is a complex mechanism that is not fully understood, especially with regard to its movements which take place between adjacent segments and are summation of movements in which many or all of the segments participate. It is doubtful that movement can be limited to two adjacent vertebrae save, perhaps, the first two and there only to a slight degree. The sacral and coccygeal vertebrae, being fixed, do not take part in spinal movement. Therefore, these two regions, sacral and coccygeal, constitute special cases because of this peculiarity, and it is significant that trauma, disease, or functional disturbance is more frequent in these regions, and probably is due to their comparative immobility. Save for the foregoing, then, mobility is one of the most striking characteristics of

the spine as it is one of the most interesting. Movement is not confined, except as noted, to two adjacent vertebrae, but involves several or all with the range decreasing as the distance from the point of origin of movement increases. Hence, it will follow that abolition of movement, from whatever cause, between



Fig. 1. Example of a compression fracture of the first lumbar vertebra. Accidental discovery; multiple injuries; no cord symptoms.

two segments of the column would show a decreasing limitation of motion proportional to the increase of distance from the origin of such dysfunction. Clinically these manifestations are of every day observation. It may be summed up in the statement that, due to the mutual interrelationship between the vertebrae, any pathological state in a given vertebra has its re-percussion throughout the spinal column.

In addition to the function of movement the spinal column has that of bearing and transmitting stresses, and for this end it is as deli-

*From the X-ray Department, Washington University Medical School.

cately balanced as it is for the purposes of movement. Just as interference with the movement of a given portion of the spine affects the whole, so does any alteration of the capacity of the several vertebrae to bear stress

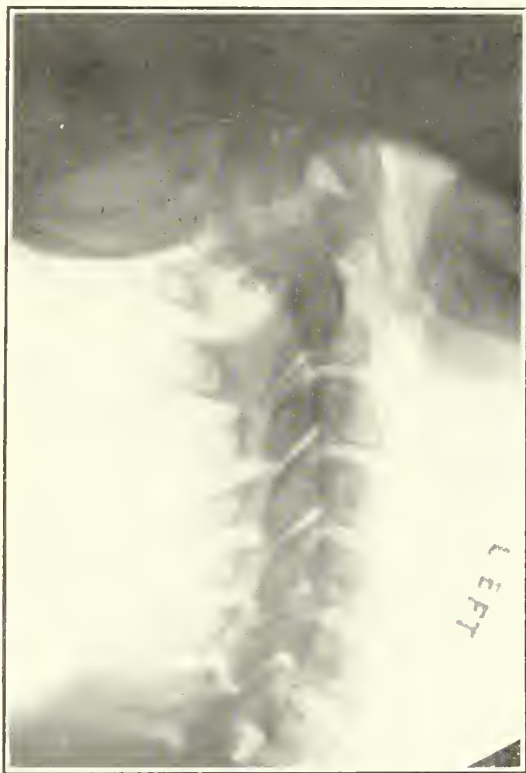


Fig. 2. Fracture of the atlas. The result of striking head on the roof of a taxi cab. Condition was unsuspected.

have its effects throughout the remainder of the column. In a word, imbalance of load in a single vertebra results in imbalance for the entire column. The comparable situation of flat feet and its remote static results in the lower extremities immediately comes to mind.

Incapacity for load bearing, or movement, of the spinal column may be of varying degrees. For instance, complete absence of motion, seen in the Marie-Strümpell type of spinal arthritis, or the total loss of weight bearing capacity encountered in Charcot's spine, typify the extremes of dysfunction. Examples of milder affections are found in attacks of arthritis seen in focal infections and commonly spoken of as "lame back." Spinal incapacity may arise through congenital defects, intrinsic disease, or trauma of the spine. Probably far more frequently it is to be traced to that great group to which the term "arthritis" is applied in the production of which age, occupation, social conditions and infections, or toxic processes elsewhere in the body, play such a major

part. For our purposes this class of spinal affections can be omitted as not being germane to the matter at hand.

From whatever cause it may arise, spinal rigidity or weakness is a major disability of increasing importance as descent in the social scale takes place. A frequent cause of the state is fracture, and owing to the fact that the writer has had this impressed upon him quite forcibly he was led to undertake a study of all the available radiographs of spinal fractures. This was done with the idea that examination of such a series might throw some light on the whole subject of spinal fractures as to incidence, location, type, treatment and final results, that might be of use to the roentgenologist.

Practically every well known book on surgery or orthopedic surgery has a good chapter on spinal fractures and their diagnosis. Although such articles are usually excellent in their treatment of symptomatic diagnosis and physical examination, they do not appear to do full justice to the radiographic aspects of such injuries. This statement is made with full realization of the limitations inherent in this method, which will be referred to again. As a matter of fact, in a traumatic case, with the local signs of vertebral fracture and paraplegia, an X-ray examination throws little additional light on the condition, except to reveal the type and extent of the fracture. In such cases the mere fracture is relegated to the background by the major importance of the cord injury, toward which all efforts at treatment should be directed. The writer would digress here, if it be a digression, to state his belief that the manipulation necessary for successfully radiographing such an injury should be engaged in with caution and could be omitted with advantage at times. Individual cases are to be handled with judgment.

The material at our disposal on this subject is not made up to any great extent of fractures of the above mentioned frankness. The frank vertebral fracture is usually easy of diagnosis and of no especial radiological interest. This is not at all true of those spinal injuries that lack cord symptoms and physical signs. Here is a group of difficult cases; one in which accurate X-ray diagnosis is essential and in which, if the correct treatment is applied, results will be as satisfactory as they are disastrous if it is omitted. Unfortunately, many of these cases, from one cause or another, are not even seen by a physician until long after the receipt of the injury, and the damage to the capacity and mobility of the spine is extensive and permanent. At such time the case is considered one of "back strain," "lumbago," or what not.

A possible explanation for the frequent lack of surgical attention in spinal fractures lies in the fact that such a large percentage are due to indirect violence and the fracture may exist at a distance from the point of application of violence, such as a compression of a dorsal vertebra resulting from a fall on the buttocks. Where there are multiple and extensive injuries, one of the spine in the absence of cord symptoms would be readily overlooked. (Fig. 1.)

Direct violence to the back or neck usually results in an X-ray examination at the point of application of the violence, hence, such fractures are fortunately discovered. Frequently the injury is so slight that after discovery of a fracture by radiography only close questioning elicits a history of a fall, blow, or other trauma, the patient having ignored it at the time of its occurrence. (Fig. 2.) The prevalence of such happenings leads to the belief that either the vertebrae are more fragile than is commonly supposed, or that a far greater force than is thought is through mechanical means brought to bear at the point of fracture.

In the remote injury class, i.e., patients who have occasion to have the spine rayed, in whom signs and symptoms might indicate fracture, it is very difficult in the radiograph to differentiate between tuberculosis and old fracture of a vertebral body. The writer frankly erred seven times in considering a Pott's disease a fracture, and there are three cases which, after weighing the history of injury, etc., he has included as fractures rather than tuberculosis.

Loss of mobility and weakness are common to all affections of the spine. In addition there are manifestations that are referred elsewhere and occasionally they are severe enough to suggest abdominal or thoracic disease requiring surgical measures. The writer has known of a laparotomy being done for exploration of the gallbladder when there was later found a dorsal Pott's disease. Several writers have pointed out the association of abdominal symptoms in vertebral disease, but the fact that such symptoms can occur from such a cause is not sufficiently recognized. It is possible that the same is true of the thoracic viscera. In the case shown in Fig. 3 the symptoms could not be attributed to direct involvement of the segmental innervation of the region from which the symptoms were referred, the vertebral injury being at a different level. It seems to have been forgotten that spasm of the spinal muscles is frequently accompanied by spasm of other muscles of the trunk, the muscle of the abdominal wall and,

of less importance, those of the thorax. The former nowadays seems to be considered as pointing exclusively to intra-abdominal disease.

That there are limitations to the X-ray examination of the spine beyond which it may supply no information regarding conditions, is conceded. This is as true with respect to fractures as to other pathological conditions. Fracture of a vertebra may involve any of its parts; fracture of the transverse process of a thoracic vertebra is either practically never recognized or it never takes place. There is strong reason to believe that the latter is the



Fig. 3. An oblique fracture of the body of the third dorsal vertebra. Accidental discovery in the course of an examination for supposed gastric ulcer.

case, as the transverse process lies deeply and is supported and protected by the spinal ends of the ribs. The spinous processes appear to be but rarely fractured. Since it is obvious that they are frequently subjected to direct violence, the conclusion is forced that such fractures are of little importance and that their detection by X-ray examination is impossible, except in the cervical region where alone lateral radiography is satisfactorily applicable to the spinous processes. Fractures of the laminae, except in the neck, are equally difficult of detection. In the upper thoracic region fractures of the vertebral bodies, unless *extreme*, are also hard to demonstrate. Finally, any fracture of any portion of any vertebra may be so slight that it cannot be demonstrated by X-ray examination. With a history of trauma and symptoms of vertebral injury, a negative radiographic examination does not warrant the omission of treatment directed toward correction of fracture of the spinal column.

Since 1911 there have been noted in the

X-Ray Laboratory of the Washington University School of Medicine, 69 fractures of the spinal column. The laboratory serves the Washington University Dispensary, the Barnes Hospital and the St. Louis Children's Hos-



Fig. 4. Slight violence was applied to the head. Partial fracture of the body of the third cervical.

pital. None of these institutions has a particularly large accident service, therefore, the series of such fractures is not as great as could be assembled, for instance, in a municipal hospital. Over this period 2225 other fractures were noted; so that there are relatively 3 per cent, of spinal fractures, as compared with Whitman's figure of 2 per cent. The surgical admissions during the time mentioned were 32,878 for the first and second of these institutions, those for the St. Louis Children's Hospital not being obtainable. The percentage, as regards all surgical entries in the Dispensary and the Barnes Hospital with conditions affecting the spine to such a degree as to call for X-ray examination, is 10.3 per cent., there having been 3,185 examinations of the spine from 1911 to 1924.

Dislocations are not separated in this series; by general consent, fracture is considered an inevitable accompaniment of a dislocation and it should be considered as present whether or not it can be demonstrated by an

X-ray examination. Also, a certain amount of dislocation is almost certainly present in fracture unless there is a simple crush of a vertebral body. Dislocation was noted in 21 of the 69 fractures.

It has been the endeavor to exclude pathological fractures from this series, as they seem to constitute a distinct class and to be a feature of the disease causing the fracture rather than a spinal affection. This was by no means an easy thing to do and it is possible that a few in the series might be considered by others as pathological rather than traumatic. This distinction is most difficult to make in the case of tuberculosis of a vertebral body. Many of these have a history of an injury and, more important, this disease may cause such a weakened state of the vertebral body that it collapses just as it would from violence. A. W. George states that bone proliferation in fracture is the distinguishing point between the two, and that this does not occur in tuberculosis. The writer recalls a fracture of a dorsal vertebra which was the exact picture of a dorsal Pott's disease with surrounding abscess. The latter appearance was undoubtedly due to hemorrhage. Strange to say, in the ex-



Fig. 5. This patient was treated for an abrasion of the face after having been knocked down by an automobile. There was pain and stiffness of the neck. X-ray examination disclosed a fracture of the odontoid with forward dislocation of the atlas.

perience of this laboratory, pathological fracture from malignant disease, either primary or secondary, has been most uncommon. The discovery of such involvement of the spine is frequent, but only one such fracture, a doubtful case, could be found. Pathological fracture as a concomitant of pyogenic osteomyelitis or syphilis has either not been met with or was unrecognized. The same statement holds true for the essential diseases of bones. The so-called Kummel's disease is, in the writer's opinion, of traumatic origin. Charcot's disease is to be considered a unique affection. The appearance, simulating fracture of a vertebral body seen in the spine of an elderly person with extensive osteo-arthritis, will leave one in doubt as to there having been a fracture at some earlier date. This is especially the case when it is borne in mind that hypertrophic changes seem to be a natural sequence to fracture about any joint, more particularly those fractures that are not diagnosed and are left untreated. Such a neglected fracture of the spine sooner or later shows extensive changes of this sort. It raises the question, do not some of the cases of extensive spondylitis originate from a fracture?

The regions of the spine in which the fractures occurred were divided among the component vertebrae as follows:

FRACTURE OF CERVICAL VERTEBRAE	
First cervical	1
Second cervical	6
Third cervical	4
Fourth cervical	1
Fifth cervical	6
Sixth cervical	2
Total	20

FRACTURE OF DORSAL VERTEBRAE	
Third dorsal	1
Eighth dorsal	1
Ninth dorsal	1
Eleventh dorsal	1
Twelfth dorsal	7
Total	11

In the thirty-five cases of lumbar fracture recorded, 62 vertebrae were broken, distributed as follows:

LUMBAR BODY FRACTURES	
First lumbar	15
Second lumbar	7
Third lumbar	9
Fourth lumbar	8
Fifth lumbar	3
Total	42
LUMBAR TRANSVERSE PROCESS FRACTURES	
First lumbar	4
Second lumbar	3
Third lumbar	5

Fourth lumbar	5
Total	17
LUMBAR ARTICULATING PROCESS FRACTURES	
Third lumbar	1
Fourth lumbar	1
Fifth lumbar	1
Total	3

The sacrum was fractured in two instances. No cases of coccygeal fracture were



Fig. 6. This case was similar to the preceding one in every respect except that it was of six years duration. Rigidity of the entire spine with total disability.

found and, unless there be much fragmentation, it seems doubtful if such a fracture could be diagnosed by X-ray. There were fifty-three fractures of the vertebral body of which forty-four were of the compression type. Of the accessory parts, other than the transverse process already mentioned, two each were of the lamina, articulating and spinous processes, and four of the odontoid. Of the total number of cases, twenty-one were acute, with the classical picture of spinal fracture. Of these, eleven had immediate symptoms of cord injury eight of them being complete paraplegias, and three had vesical or rectal symptoms associated with injuries of the lower lumbar segments. There were fifteen cases with spinal nerve symptoms. Forty-eight cases were adventitious discoveries and, hence, lacked cord and, with five exceptions, spinal nerve symptoms, the occasion for the examination being limitation of motion, weak-

ness or pain. (Fig 4) This is the class that is of the most interest and importance to us, for it indicates that too often an X-ray examination is omitted because of the supposedly trivial nature of the injury and in consequence the patient does not receive correct treatment. It is here that the roentgenologist can be of immense assistance to the surgeon. (Figs. 5 and 6.)

It is also important for the radiologist to direct his attention toward the discovery of spinal fracture, for the reason that with the increasing use of the automobile, accidents in which great violence is operative will become more frequent. This series of fractures of the spine begins in 1911, and it is to be noted that sixteen of them are due to automobile accidents, all of which occurred within the last five years, whereas fractures from other accidents seemed to remain constant throughout the period studied. It should further be noted that the increasing frequency in fractures of the spine which we found occurring in our institution is to be attributed exclusively to the automobile.

SUMMARY

Traumatic fractures of the vertebral column unaccompanied by cord or nerve symptoms are very frequently unrecognized until accidentally discovered in the course of an X-ray examination made on account of pain and stiffness of the back, or pain referred to some other part of the body. Limitation of motion or stress bearing capacity of any vertebra affects the entire column. Spinal rigidity or weakness is a major disability increasing in importance as descent in the social scale occurs. The radiographic aspect of obscure fractures of the spine is not sufficiently stressed. Accurate, early X-ray diagnosis of questionable cases is essential since the results are so disastrous if correct treatment is omitted.

600 S. Kingshighway.

TOOTH DESTRUCTION IN THE PREGNANT WOMAN AND HOW TO CONTROL IT*

From the Department of Gynecology and Obstetrics,
St. Louis University Medical School.

WILLIAM KERWIN, M.D.

ST. LOUIS

The study of the teeth during pregnancy is fascinating because of certain definite changes which occur only at this time. It is generally

known that during pregnancy there is a tendency to destruction of the tooth elements and the old axiom found in text books, "For every child a tooth," is untrue to the extent that it minimizes the fact; it would be better stated, "For every pregnancy several teeth." How often do we hear that with her last pregnancy the patient lost three or four teeth? The problem that confronts us as obstetricians is that of finding the cause and lessening the processes of destruction at this time in a woman's life. In a study of the cause two factors are present: One, a local reaction, and the other, an absorption into the blood of the tooth's salts. That the absorption theory must give way to local reaction as the cause of tooth destruction in pregnancy I shall attempt to prove in the following paragraphs.

The tooth is divided into three portions, the crown, the neck and the root. The tooth consists of enamel, dentine and a pulp cavity. The enamel is the hardest and the most compact part of the tooth and it forms a thin crust over the entire crown as far as the commencement of the root. The chemical composition of the enamel is 96.5 per cent. earthy, and 3.5 per cent. animal matter. The earthy matter consists of the phosphate of lime, calcium fluorid, carbonate of lime and other salts of less significance. Calcifications of the enamel for the primary set of teeth is completed during the last four months of intra-uterine life and for the secondary set of teeth before the age of fifteen.

The enamel, once formed, is practically free of blood supply and the outer surface has no blood vessels at all. It is on the outer surface of the enamel that the destructive process begins, according to my observation in over one thousand cases. If the enamel has no blood vessels it is hard to conceive of its earthy substance being taken into the blood stream for the purpose of supplying material for the development of bone in the fetus and maintenance of proper calcium metabolism in the mother. Furthermore, all the teeth of an adult would make in the aggregate so little bone for the fetus, that the absorption theory can be dispensed with. This leaves the question of local reaction for consideration. If the surface enamel is affected through some local reaction, it must be brought about through changes in the saliva. We are told that under normal conditions the salivary glands give out an alkaline secretion, although the work of Starr¹ tends further to enlighten us on this point. In testing the salivas of several hundred pregnant women at the Cass Avenue Prenatal Clinic by the crude litmus paper method, we found that ninety-one per cent. showed acid, six per cent. neutral and three per cent. alkaline. These

*Read before the 68th Annual Meeting of the Missouri State Medical Association, Kansas City, May 5, 6, 7, 1925.

tests were made between ten and eleven a. m., i. e., during the fasting period.

A higher per cent. of white women than colored women have acid salivas. If a patient had heart-burn or was vomiting, the acid reaction was stronger than if she were free from these symptoms. The salivas of medical students tested at the same time of day showed acid in about seventy-five per cent. and the reaction was as a rule very faint. In an effort to determine the acid content of the saliva of pregnant women, Dr. A. P. Briggs, of the Department of Internal Medicine, St. Louis University, made a study with the following results: Chemical examination of saliva from pregnant women who have erosion of the enamel and who were vomiting or having heart-burn, showed no free Hcl or any altered amounts of chlorides which might result from neutralization of Hcl by substances from the teeth.

Starr² found a considerable variation of the hydrogen ion concentration of human mixed saliva, depending on such factors as deep breathing, fatigue, excitement, emotions, etc. He showed that after the injection of sodium bicarbonate the hydrogen ion concentration of the mixed saliva increased while that of the urine decreased, i. e., the salivary pH. varied inversely with that of urine in every instance. Thus, while the body fluids in general may be regarded as becoming more alkaline as the result of the administration of sodium bicarbonate, the mixed saliva becomes more acid. Vigorous forced breathing in the open air, with mouth closed, resulted in decreased acidity of the mixed saliva. The H^+ decreased during emotional excitement and increased during fatigue.

The above interesting facts can affect our problem in only a minor way and a more practical cause must be looked for. We know of the frequency of heart-burn and vomiting in pregnancy and that the stomach secretion at this time has a high free Hcl. ratio. In the stomach secretion of normal individuals the free Hcl. represents two to four-tenths per cent. although Bell and McAdams³ have shown that this varies considerably at different times during the day, depending on such factors as swallowing alkaline saliva, fasting, emotions, and nausea. From the following experiment we can see how destructive to the tooth enamel would be the vomitus of a pregnant woman. We subjected the sound teeth from an adult and from a child to a .2 per cent. Hcl. solution, allowing the teeth to remain in the solution over night and found that the enamel, instead of being smooth and hard, was a honey-combed crust which could be easily pinched off, leaving the dentine exposed.

Lactic acid in the same strength failed to produce the same effect although in a stronger solution it accomplished the same result. (Lactic acid is found in the mouth when there is present decomposition of food particles retained in the teeth.) The foregoing facts lend support to the Hcl. idea. Fifty per cent. or more of all pregnant women because of vomiting keep their teeth bathed in a hydrochloric acid saliva part of the time during the pregnancy. May it not be assumed that the Hcl. saliva is the offending factor?

How many pregnant women have sound teeth? To clear this point, a study of three hundred white and three hundred colored women was made. These six hundred women were in all stages of pregnancy, were of various ages and were in para ranging from one to ten plus. It was found that twenty per cent. of white women had fair or good teeth, and eighty per cent. had poor teeth; that forty per cent. of the colored women had fair or good teeth, and sixty per cent. had poor teeth. Fifty per cent. were under twenty years of age, thirty per cent. were under thirty years of age and twenty per cent. were over thirty. Ninety-seven were in their first pregnancy, one hundred thirty-five were in the second, one hundred eighteen were in the third, eighty-one were in the fourth, fifty-nine were in the fifth, thirty-seven were in the sixth, twenty-four were in the seventh, eighteen were in the eighth, thirteen were in the ninth, four were in the tenth and the rest had had more than ten previous pregnancies.

We included among the fair and good cases those who showed only a slight dissolution of the enamel and those as poor who showed one or more caries or complete loss of enamel of one or more teeth. The cases with slight destruction of enamel, included among the fair group, could properly have been placed with the poor group.

Ballentyne⁴ made a study of one hundred cases and found only two with perfect teeth, ages twenty-three and twenty-three. Fifty per cent. were twenty-five years or less and fifty per cent. were primipara. Ninety-three had more than one decayed tooth. Certainly not more than one in five women who come to us have fair or good teeth, but it becomes our duty nevertheless to keep the teeth in as good condition as we find them at the patient's first visit. That so few women come to us with good teeth is appalling. Wherein can the obstetrician be of service in improving the situation.

Cross⁵ states: "Preventive dentistry takes account of the mother's diet and the nutritional balance during early years." These are real factors in dental decay. The sixth year of a

child's life divides the preventive and preparative care necessary. Prenatal care is better than care at the nursery age and it is the only time to realize the importance of the primary teeth and to lay the foundation for good and sound permanent teeth. The mother, before the baby arrives, must take the responsibility of giving good or bad teeth to the offspring; before the child is six years old the whole question of good teeth for life will have been decided.

Cross states further, "Ninety-six per cent. of the children who come to this country from Southern Europe have sound teeth, while the teeth of ninety-six per cent. of American born children are defective." An observation made by Dick⁶ on four hundred and three children of eleven years and over showed the effect of the nutrition of the child on the condition of the teeth. This study was made on children who attended the good class and the poor class schools. In two hundred eighty-one children from the poor class schools one hundred sixty-seven, or sixty per cent., showed the enamel normal and one hundred fourteen, or forty per cent., showed the enamel defective; whereas children from good class schools showed eighty per cent. with good enamel and twenty per cent. with defective enamel. These startling facts would suggest that there must be some condition in the pregnant woman that is responsible for the poor enamel of the teeth in the offspring. Fones⁷ states, "Sound teeth are dependent upon the structure of the enamel." Since the greater portion of the enamel is calcium the trouble probably rests with the calcium metabolism in the mother. Williams⁸ contends, "A large amount of calcium must be assimilated for the tooth or else the bones and the teeth during pregnancy become decalcified."

Von Noorden⁹ states, "Only a trace of lime is contained in the muscle and glands, not more than 70 grains, while in the bones one hundred times as much is stored up." It therefore seems justifiable to attribute any large increased or decreased storage of calcium to the metabolism in the bones. According to Fitch¹⁰ the body contains seven pounds of mineral matter of which five-sixths are in the bones. It is obvious that the mineral ingredients of the diet are important and they are therefore to be regarded as food. Calcium is one of the principal minerals required in the food. In the blood it occurs in the form of CaO, and is present in bone to the extent of 370 to 500 parts per 1000 of the fresh substance. Rey¹¹ showed that lime injected into a dog intravenously or subcutaneously lingered in the body to the extent of 50 per cent. from 3 to 5 days. Following an injection the amount of calcium in the blood after three or four days is twice the normal.

To maintain a high calcium balance we give every woman who applies for prenatal care calcium lactate in five grain doses twice daily. This is continued throughout her pregnancy in the hope of not only protecting the mother but also of giving to the child a good set of primary teeth and good bones. The diet of the American people is scant in calcium salts. Williams,¹² to protect the pregnant woman against the loss of calcium, advised the consumption of one pint of cow's milk daily during pregnancy.

How do the decalcified teeth affect the pregnant woman and the nursing mother? Rawley¹³ made a study of the teeth of pregnant women at the Mayo Clinic and found that certain cases of vomiting and toxemia are due to periapical infection and that the removal of the diseased teeth cures some cases. He recommends roentgenologic examination of the teeth during pregnancy where there are any complications. Full mouth roentgenograms are made in the Mayo Clinic of every pregnant woman showing any signs of dental disease. If periapical infection is diagnosed, or caries are extensive enough to warrant devitalization, extraction is preferred to reconstructive dentistry. Cultures from roots of divitalized teeth consistently show a positive growth of streptococci (either viridans or hemolytic type). Pyorrhea should not be overlooked and cavities in vital teeth should be filled with cement rather than permanent materials.

Reactions resulting from extraction should be observed by temperature readings, urine and leucocyte examinations. Goodman¹⁴ concurs in this opinion. Waller¹⁵ contends that dental disease militates against successful breast feeding. He was able to improve the milk of the breast in eighty per cent. of the patients where dental sepsis could be held responsible. It is our routine to have the pregnant patient see her dentist and have all necessary dental work done, and in several hundred private cases no ill results have occurred. The old fear of dentistry on the pregnant woman has become obsolete.

How can the obstetrician help to improve the condition of the teeth? 1. By urging the use of alkaline mouth washes during pregnancy. This should be done several times daily and especially after each vomiting spell. 2. By supervising the diet of the pregnant woman and prescribing calcium throughout pregnancy. 3. By seeking the early cooperation of the pediatrician so as to insure the proper diet for the growing child. 4. By cooperating with the dentist where the woman shows defective teeth.

CONCLUSIONS

1. Pregnancy claims a high toll in tooth expenditure.

2. Tooth destruction in the pregnant woman is due to an acid saliva.

3. The tooth can be preserved at this time.

4. All necessary dentistry during pregnancy should be done regardless of the duration of pregnancy.

5. The aim at tooth preservation is one of the obstetrician's duties.

6. Better teeth can be given to the new-born by proper prenatal care.

7. Pregnant women should use frequently an alkaline mouth wash and take calcium throughout the pregnancy.

Lister Building.

BIBLIOGRAPHY

1. Starr, H. E. J. of Biolog. Chem. 54. 1922, Pg. 43.
2. Starr, H. E. J. of Biolog. Chem. 54. 1922, Pg. 55.
3. Bell, J. R. and McAdams, W. Am. Jour. Med. Sci., April, 1924, Pg. 520.
4. Ballantyne, J. W. Brit. Med. Jour., 1919, Pg. 103.
5. Cross, H. D. National Health, 1923, Vol. 5, Pg. 609.
6. Dick, J. L. Lancet, 1918, Pg. 457.
7. Forns, A. C. N. Y. State Med. Jour., Vol. 24, Pg. 539.
8. Williams, W. Williams text book of Obstetrics. 5th Edition, Pg. 117.
9. Hall, W. Physiology of Metabolism. Vol. 1, Pg. 422.
10. Fitch, W. E. Diet Therapy. Vol. 1, Pg. 255.
11. Rev. Phys. of Metabolism. V. Noorden, Pg. 422.
12. Williams, W. Obstetrics, 5th Edition, Pg. 117.
13. Rawley, W. N. Bull. N. Y. Lying-In Hospital, July, 1922, Pg. 82.
14. Goodman, S. J. Am. Jour. Obstet., 1919, Pg. 689.
15. Waller, H. Lancet, 1916, Pg. 785.
16. Brubaker, A. P. Human Physiology 5th Ed. Pg. 148.
17. Howe, R. R. and Keniston, M. R. Am. Jour. Physiol. Pg. 28. 46-1918.

DISCUSSION

DR. GEO. F. PENDLETON, Kansas City: It is a well known fact that calcium is somewhat like iron in absorption in the body. If one is anemic he cannot eat an iron rail and recover his blood over night. If he has a decreased amount of calcium, he cannot take a lot of milk tomorrow and increase the calcium content of the body. Calcium is absorbed by the body only in a small amount each day.

The paper centers around the question of teeth and the absorption of calcium in the body. I heartily approve of everything he said about the teeth. The pediatricians are telling us more and more that some of our babies, and especially when bottle fed, are rickety, and even rickety from before birth.

It is a well known fact that cod liver oil through its vitamins alone effects greater absorption by the body of calcium per day, from two to ten times as much can be absorbed per day.

I would suggest therefore in the second part of the paper that perhaps cod liver oil given frequently during pregnancy would be a good thing for our babies who more and more as time goes by are being fed at least partially upon the bottle.

DR. GEORGE C. MOSHER, Kansas City: I want to corroborate what has been said, and to call attention to a statement made by Dr. McCallum, of the Department of Hygiene of Johns Hopkins, who was our guest three years ago. Dr. McCallum said that if he had the control of the diet of the mothers of America for two generations he could put the dentist out of business. That meant, according to Dr. McCallum, during pregnancy, a diet of milk and green vegetables. He called attention to the teeth of the people of the north of China, strict vegetarians, who are not only tall and robust but also have the best teeth of any in the world.

If we can by diet in two generations or five generations be able to preserve all our teeth until the end of our mundane existence, we have accomplished something in prenatal care and added to our happiness.

DR. KERWIN, closing: Dr. Pendleton brought up an important point, something I do myself. I use cod liver oil. Do not start in the early months when the patient is nauseated. It would do no good. There is no real indication for it then because it is during the last four months of pregnancy that the foundation for the primary set of teeth is laid.

I do not wish to convey the idea that bone material is not taken from the mother to supply the fetus, but I contend it cannot be taken from the enamel of the teeth. If you will take the trouble to examine very closely the teeth of these individuals you will find not only the molars but the incisors eroded in the pregnant woman, especially if the patient is vomiting, because the enamel does not stand the acid content of the stomach.

I approve the administration of cod liver oil. We do not know the best way to give calcium. I think diet is as good as any but it is a thing that has been so rearranged by the canneries that we do not know what we are getting in the way of food. The woman in the rural district who is attending to her own garden gives to her child better teeth than does her sister in the city.

How shall we supply calcium? I do not know. I give calcium lactate. It is not altogether satisfactory but is the best thing we have at the present time.

A more important thing is, not the administration of calcium, but the protection of the teeth against the acid saliva in the mouth, because that is the thing that affects the enamel. If you will study the teeth you will see the teeth being eroded by the saliva. We must modernize our teaching to the extent that the saliva is sometimes alkaline. Heartburn is an expression of the hyperacidity of the stomach. When the woman vomits she bathes her teeth in an acid fluid.

Dr. Mosher brought out the point which is the crux of the situation. If we could control the diet of every pregnant woman for two generations every one would have good teeth because the whole thing is solved during the prenatal stage.

Let us make a real effort to protect our pregnant woman, giving to her better teeth by the proper prenatal care. Obstetrics does not consist alone in being a night watchman and delivering children by freight or express, as the case may be; but it does consist in taking care of every woman when she becomes pregnant until she becomes pregnant again.

STEINMAN PIN TRACTION FOR FRACTURE OF THE LEG*¹

WARREN RAINEY, M.D.

ST. LOUIS

A majority of fractures of the leg occur without displacement of the fragments, even when both bones are involved. A fairly large number present overriding and subsequent shortening. In a great many cases a simple type of extension is all that is required to main-

*Read before the 68th Annual Meeting of the Missouri State Medical Association, Kansas City, May 5, 6, 7, 1925.

tain the necessary lengthening. In a small minority of cases simple traction apparatus is not successful and a more vigorous method has to be applied.

Direct skeletal traction of the os calcis meets this requirement. Such traction can be made with the Steinman pin. For a number of years this procedure has been followed with varying degrees of success. In the first year of the war a number of patients were treated by this method, and since that time a few patients have had the Steinman pin passed through the os calcis for a direct pull upon the leg. The method as outlined has not been particularly successful for two reasons: One is that the patient has invariably suffered a great deal of pain, in fact, would complain of pain from the first day of the fracture until the pin was removed. The other objection is that a variable degree of osteomyelitis of the os calcis results which sometimes takes months to heal and not infrequently results in subsequent operations for osteomyelitis.

Recently, a new method has been devised for application of the Steinman pin. It is so inserted that it barely grazes the upper surface of the bone at the anterior insertion of the tendo achillis in the os calcis and the technic is very simple and the operator does not have to be a skilled surgeon in order to insert the pin. With local anesthetic, that is $\frac{1}{2}$ of 1 per cent. novocain, the skin is infiltrated. A long hypodermic needle is then passed deeply through the tissues of the leg just anterior to the insertion of the tendo achillis in the os calcis. This entire space is filled with novocain. When the inside surface of the leg is reached with the needle, the skin on that side can be infiltrated before the needle is withdrawn. With a bistoury, a small puncture is made in the skin and the Steinman pin is firmly grasped in the right hand, the foot held in the left. With comparatively little pressure the pin is forced through the tissues until bony contact is felt. The pin is directed so that it barely grazes the upper surface of the bone until it reaches the skin of the opposite side; here again the skin is perforated with the knife and the pin then allowed to come on through until it is evenly divided as to length on both sides of the foot.

It is very important that the skin is not drawn down out of position when the pin is inserted. Absolute relaxation of the skin is necessary if the patient is to feel no discomfort when the traction is put upon the ends of the pin. Again, it is important to see that the pin barely grazes the upper surface of the bone, not forcing its way through the periosteum, nor being inserted a distance away from the bone itself.

The skin wounds about the two ends of the

pin should be covered with iodoform gauze. Infection rarely takes place, the original dressing remaining in place throughout the entire period in which the pin is in position. A traction apparatus, whether it be a horseshoe shaped piece of wire or an ordinary Buck's extension with boardspreader, is now fastened to the ends of the pin and with a pulley, a rope is attached at the foot of the Thomas splint and weights can be added up to 25 or 30 pounds with very little discomfort to the patient.

In selecting the support for the leg, the Thomas splint probably answers the purpose better than any splint that has ever been devised. There are several advantages to this splint where the Steinman pin method is used. First the lateral bars of the splint give a stability and the ring at the hip makes it possible for the patient to move about in the bed with the knowledge that it is not possible at any time to displace the splint. There are two ways of using the splint: The first and probably the most practical, is to fix the splint securely to the foot of the bed. The other is to extend by ropes and counterbalances to an overhead bed frame so that the patient is not limited to any movement. This latter type of apparatus does very well in a hospital that is well staffed with interns and nurses who understand the use of this overhead extension. But the first type is very practical inasmuch as it does not take constant adjustment to keep it in proper condition.

HISTORY

Steinman first introduced the idea of skeletal traction in 1907. At that time he applied this method by driving nails directly into the condyles of the femur by which direct pull was made. Condovilla, in 1903, working entirely independent of Steinman used nails for direct skeletal traction. Becker, in 1908, was the first to introduce the nail entirely through the bone in the form of a pin. Chutro in his clinic in Paris at the Pasteur Institute during the World War, popularized the band stirrup which was originally brought out by Finichetta which he inserted over the os calcis and made direct pull in fractures of the leg. He experienced some technical difficulty in forcing the steel band through the tissues. Combining his idea and the application of the Steinman pin, one develops a technic that is comparatively simple and if properly followed, no harm can result.

During the service of the Barnes Hospital organization, Base Hospital 21, several cases of fractures of the leg were treated with Steinman pin inserted just above the os calcis with very good result; but for some reason until very recently the method has apparently fallen into disuse. Combining the ideas of Chutro's

band and the Steinman pin, Dr. Hawley in a communication in the *Journal of the American Medical Association*, 1918, suggests the use of a combination of the pin and band that is very practical for traction over the os calcis. In reviewing the literature we were unable to find any recent writings on the use of the Steinman pin in fracture of the leg.

Sir Arbuthnot Lane devised his metal plate for internal splinting in about 1910. Open operations were not in particularly high favor for fracture of the bones of the leg. By 1912 the Lane plate was enjoying a high degree of popularity among the surgeons of this country and the plating of the bones of the leg became very popular. Simple fractures were opened and foreign plates of metal of varying lengths were inserted to maintain position. Compound fractures were treated in the same way. It was soon discovered that compound fractures invariably became infected; the plates acted as foreign bodies and had to be removed. Plating of compound fractures consequently rapidly declined in popularity. Comparatively few surgeons were equipped with the proper facilities for doing the prescribed Lane technique and the result was that many simple fractures were converted into infected compound fractures. Chronic osteomyelitis developed about the screws and months and years after the insertion of a plate complications would arise requiring the removal of the plate and reparative operations on the bone.

Since the war there has been a revival of interest in the application of traction and the result is that only a few cases of fracture are operated. This swing to conservatism is decidedly wholesome and the end results are greatly better than they were about fifteen years ago when the open operation for fractures was so very popular.

In a certain number of fractures of the leg treated with the plaster cast it is impossible to get a good reduction and then hold it in position. Where the plaster cast method fails the next method of choice is some type of adhesive plaster, such as the Buck's extension and pulley. Where this second method fails, we now resort to the Steinman pin traction over the os calcis. Since using this as the third method of choice, we have been able so far to avoid the open operation which naturally would follow as the fourth method. If one will keep this schedule in mind and not be too hurried in the use of the Steinman pin or the more drastic open operation before giving the first and second methods a good try-out, he will find that the open operation has been decidedly reduced in number. The department of surgery of Washington University, has practically made this a policy in the service of the St. Louis City

Hospital and the result has been very gratifying

ANATOMY

The anatomy about the ankle joint is particularly well adapted to the technique of transfixion with a Steinman pin. There is a little anxiety on the part of the operator as to the possibility of injuring some vital structure, artery or nerve or even the possibility of penetrating the posterior joint cavity. The posterior part of the true ankle joint (astragalotibial) dips downward and well back behind the posterior surface of the tibia. The dissection shows that this particular part of the exposed joint is covered by a fairly thick pad of fat. This pad of fat would offer no resistance to the pin but on a close inspection, one discovers that the true ankle joint is separated from the superior surface of the os calcis by nearly the full thickness of the posterior surface of the astragalus. At least three-fourths of an inch intervenes between the lower end of the astragalotibial joint and the point where the pin is inserted. The joint between the articulations of the os calcis and the astragalus ends abruptly at the posterior surface of the astragalus so that it is absolutely free from any danger.

On the internal aspect of the ankle are the posterior tibial artery, nerve and vein which all pass under the internal lateral ligament of the ankle joint. These structures swing well forward away from the os calcis to pass under the internal malleolus. The tendon flexor hallucis longus is just posterior to the artery and nerve. By outlining the insertion of the tendo achillis into the os calcis and placing the needle directly in front of it and close to the bone there is not the least danger of injury to the artery or nerve.

Another anatomical consideration is the relaxation of the gastrocnemius muscle by bending the splint at the knee. This in turn gives relaxation to the tendo achillis and aids in reducing the overriding of the bone fragments. Bending of the splint at the knee also adds much to the comfort of the patient.

It is very important to note that there is considerable direct pull upon the more powerful flexor group of muscles and consequently there is a tendency to a foot drop which if neglected might result in a pes cavus deformity which is very difficult to remedy. As soon as the pin is inserted and the leg fixed in the Thomas splint some device should be used to hold the foot up to a right angle. An ideal apparatus can be constructed with adhesive plaster attached to the bottom of the foot with overhead rope pulley and counter weight. This allows for a certain amount of play in the foot which prevents stiffness and also helps overcome muscular cramps.

The Thomas splint and Steinman traction will not prevent posterior bowing if good anatomical alignment is not maintained and the suspension slings kept adjusted. Lateral displacements are not likely to exist after the traction is on, but if they do it is wise to attempt an adjustment under a light anesthetic, not removing the weights on the traction during the manipulation.

SELECTION OF CASES

The lower the site of fracture in the leg the greater is the possibility of displacement of the fragments, consequently fractures in the upper half of the tibia are rarely displaced. Again the lower the site of fracture the less amount of skin surface is available for the application of adhesive plaster strips. Therefore, nearly all fractures requiring the use of the Steinman pin are in the lower half of the leg.

Badly comminuted fractures involving a long area of the bone which do not respond to simple traction are easily drawn down and held in position until union has taken place.

Spiral and oblique fractures just above the ankle joint which tend to displace with all types of traction or plaster of Paris casts, have generally resulted in open operation for reduction and fixation of the fragments; but we believe although we have not had the opportunity to try the Steinman pin method on this particular fracture that it would solve the problem and avoid the open operation.

In some cases the use of adhesive plaster is not tolerated by the skin and the boot or shoe causes edema and swelling of the foot. This reaction to adhesive usually takes place by the end of the first week or ten days. Union has not taken place to the extent that heavy traction will not bring the bones down into position.

The Steinman pin should be applied directly in every fracture of the leg with displacement of the fragments where there is extensive destruction of skin surface or severe injuries to the soft parts. This also holds true of the compound fracture.

ABSCESS FORMATIONS

When abscess forms about the site of compound fractures where the Steinman pin is already in position the weights should not be removed during the process of draining the abscess. By choice, a certain number of slings should be removed which support the leg, and the leg and lateral borders of Thomas splint cleansed and prepared for operation. The bed underneath the splint should be covered with sterile sheets and towels and the operation performed and drainage established without removing the patient from the bed. If this is not

practical and it is thought advisable to remove the patient to the operating room, the Thomas splint should be so handled that at no time is the weight removed from the leg.

This same plan is practically a case of second hemorrhage from either an eroded posterior tibial or interosseus vessel. If at the time of hemorrhage there is an excessive amount of weight on the leg, a small part of this weight might be removed. It has probably been pretty definitely established that in the case of abscess formation, good traction assists in the drainage and traction probably has nothing at all to do with the erosion of vessels resulting in hemorrhage.

In the last year and a half at the Barnes Hospital and St. Louis City Hospital, we have used this method in five cases. A sixth case, one of the recent cyclone victims, in the St. Luke's Hospital is also mentioned in this report. These patients have all been very comfortable and the result has been very good. We have not tried this method in fracture of the os calcis with displacement of the posterior fragment but believe that with the pin inserted well through the substance of the tendo achillis this fragment could easily be held in position and no open operation be necessary. Certain experiences with compound fractures of the os calcis have made us very wary in converting a simple fracture of this bone into a compound one, inasmuch as osteomyelitis once established is very hard to cure.

SUMMARY

1. Steinman pin traction over the os calcis for fracture of the leg in cases where simple traction is not successful in overcoming shortening, should be tried.
2. Do not delay starting this method as callus may form and defeat the purpose of traction.
3. Comminuted fractures with overriding and displacement of the fragments are well suited to os calcis traction.
4. Spiral fractures of the lower third of the tibia that resist simple reduction with a boot or tennis shoe are easily drawn down into position and maintained without pain until union has taken place.
5. Compound fractures accompanied by swelling are more comfortable with the pin over the os calcis than with any type of boot or adhesive over the leg and foot.
6. Infection about the site of fracture or abscess formation is no contraindication to continuing this method. Drainage is improved by good traction and at this stage is when most malunions develop because frequently traction has to be discontinued at this period.
7. In fracture of the os calcis with displacement of the posterior fragment this method

may be tried in preference to open operation.

8. Note that no mention or recommendation has been made for this type of traction for fracture of the femur. The constant pull upon the knee joint might result in injury to the ligaments.

9. In that the anatomy about the os calcis so readily adapts itself to this technic and the introduction of the pin is so easy, this method of traction should come into considerable favor.

University Club Building.

1. From the Department of Surgery, Washington University. Indebted to the Department of Anatomy for Anatomical Material and helpful suggestions.

THE NON-TUBERCULOUS HIP OF EARLY LIFE

J. ALBERT KEY, M.D.

ST. LOUIS

II. IN CHILDHOOD

In childhood, that is from the third to the thirteenth year, not only is the anatomy of the hip changing but it is subject to weight bearing and frequent additional trauma. This also is a period in life during which infectious diseases are particularly prone to occur. Furthermore, it is the time when tuberculosis of the hip is most frequent. Consequently it is a period when a great many non-tuberculous hips are diagnosed and treated as tuberculosis of the hip and eventually regarded as unusually successful cures. So often does this occur that many men honestly feel that they are able to cure a large percentage of their cases of tuberculosis of the hip. The non-tuberculous hip affections of children which we will consider are coxa vara, coxa plana, arthritis and pseudo-arthritis of the hip.

Coxa vara is a deformity of the hip in which the lower extremity deviates towards the midline of the body. Anatomically it may be due to a slipping downwards of the head of the femur, a deformity of the head or acetabulum, a bending of the neck or an outward bowing of the upper portion of the shaft of the femur. In childhood the important types are rachitic and traumatic. Both are cervical in type, that is the deformity is in the neck of the femur.

Rachitic coxa vara is due to the gradual bending downwards of the softened neck under the influence of weight bearing and muscular pull. The angle of the neck with the shaft, which is normally around 130 degrees, may be 90 degrees or less. The child walks with a waddling gait resembling that of a

double congenital hip. Abduction, extension and internal rotation of the hip are limited. The deformity is much less commonly noted than are bow legs or knock knees. However it is probable that it is present to a moderate degree in most cases of severe rickets but on



Fig. 1. Coxa plana. Duration 4 months. Moderate flattening of the head.

account of the deep seated location of the hip it is rarely diagnosed unless the deformity is marked. The prognosis is good as many of these cases tend to correct themselves as growth proceeds. The treatment is prophylactic by freedom from weight bearing while the rickets is acute. If the deformity is noted while the rickets is active and the bones soft then the child should be put to bed with the limbs in extension, abduction, and slight internal rotation, in an effort to correct the deformity. If the rickets is healed it is of course useless to try to alter the hardened bone by the above methods. In such cases the child should be observed over a period of a few years to determine whether or not the deformity is being corrected by growth. If the coxa vara is marked and not improving then subtrochanteric osteotomy is indicated.

The mechanics of the hip in childhood is good and anatomically it is less exposed than is that of the adult. The shaft of the femur is weaker than the hip. Consequently traumatic injury of the hip is uncommon in children. In the hip the point of least resistance is the neck of the femur and this is occasionally fractured. These fractures differ from those of adults in that the fracture is usually incomplete or subperiosteal and there

may be little or no deformity or shortening at the time of the injury, and the child is able to be up and about in a few days. The true condition is often undiagnosed and weight bearing permitted. The result is a gradual yielding of the femoral neck with a



Fig. 2. Coxa plana. Duration 1 year. The head is represented by a small mass on the inner angle of the thickened neck.

development of a marked coxa vara deformity. The treatment is fixation in abduction, extension, and internal rotation with protection from weight bearing until union is firm. In the cases seen late with deformity and firm union subtrochanteric osteomy is indicated.

Coxa plana or flat hip is the term suggested by Waldenstrom in 1920 for the condition first described by Arthur Legg, of Boston, in 1909 and termed by him osteochondral trophopathy of the hip. It was very shortly described by Waldenstrom, Sourdat, Calve, and Perthes, in the order mentioned, and is usually referred to as Perthes' disease or osteochondritis deformans. It is the condition which closely resembles tuberculosis of the hip and probably accounts for the most of the cases of so-called tuberculosis of the hip which have been cured without deformity or marked impairment of function. In the 16 years that have passed since the condition was first rec-

ognized as a clinical entity a voluminous literature has appeared on the subject.

In symptomatology it resembles a mild case of tuberculosis of the hip. A child, usually a boy between five and ten years of age, begins to limp and at times complains of a pain in the hip or knee. The onset may be very gradual or it may be fairly acute with pain so severe as to confine the patient in bed. The pain may be mild or quite severe and as a rule varies from time to time. It is increased by activity and usually disappears entirely with rest in bed for ten days or so, but may reappear again upon the resumption of activity. About 10 per cent. of the cases are bilateral.

On physical examination the patient may show nothing except slight limitation of abduction and of internal rotation and no pain or tenderness. Or the condition may be acute with practically no motion in the hip in any direction and acute pain upon attempted passive motion. As a rule the patients are not seen by a physician until they have been limping for some months. At this time there is slight atrophy of the thigh and calf and on palpation the head of the femur may be felt to be enlarged. As a rule there is no fever, no leucocytosis, and the general health is not impaired.

The X-ray picture is presumably normal in the beginning, that is the symptoms occur before bone changes of sufficient degree to cast a shadow are present and a few cases are on record in which the X-ray was obtained sufficiently early to be negative. As a rule, however, the X-ray shows the head of the femur flattened and the convex border is slightly irregular. The epiphyseal line is irregular and the bone structure of both the head and neck are of irregular density, that is there are areas of rarefaction and condensation of bone. As the disease progresses the head becomes more and more flattened and broadened as though it were softened and squashed by pressure from above. (Fig. 1.) The spottiness of the bone structure increases and the head may appear to be fragmented into three or more pieces, or may almost fail to cast a shadow on the X-ray plate. (Fig. 2.) The epiphyseal line becomes more crooked and the neck is thickened and appears to be shortened. The lateral border of the head approaches the great trochanter. This stage lasts three or four years and then repair begins, calcium salts are laid down and the head and neck become of normal density, though they never regain their normal form. The acetabulum adapts itself to the flattened head. The X-ray changes have been gone into in detail because they are characteristic and are the only possible ba-

sis without arthrotomy or aspiration of the joint on which coxa plana can be differentiated from a mild case of tuberculosis of the hip.

In spite of the interest shown in this condition by orthopedists both here and abroad the etiology remains to be discovered, and the charm of the unknown will probably cause it to occupy a prominent place in the orthopedic literature for some years to come. In a few operated cases cultures of attenuated pyogenic staphylococci have been obtained, but these were atypical cases with fever and leukocytosis. Some of the French authors lay stress upon the fact that certain cases have followed measles or chicken-pox. Murk Jansen ascribes it to concentrated pressure upon a small area of the femoral head caused by ischium varum. Rickets and tuberculosis were incriminated early, and the spirochetum pallidum has of course been indicted from time to time, as it always is in chronic disease of the bones or joints of unknown origin.

Legg's theory that the condition is due to trophic disturbances caused by circulatory changes resulting from trauma is a most attractive one. Certainly a large proportion of the cases give a very definite traumatic history. However, I am inclined to modify Legg's theory to this extent; trauma is the immediate cause but coxa plana is produced by trauma only in certain individuals who are predisposed to develop the condition. The nature of this hyper-susceptibility in the hip is at present unknown, but its existence is definitely proven by the fact that about 10 per cent. of these cases are bilateral.

The treatment is rest in bed as long as the symptoms are acute and relative freedom from weight bearing and some restriction of activity until the head is well calcified and has assumed its permanent form. Long periods of rest in bed with traction followed by some years of freedom from weight bearing in traction abduction splints do not seem to be justified. The prognosis is a very serviceable painless hip with slight limitation of abduction and internal rotation.

In speaking of arthritic conditions of the hip in childhood we enter what is to a considerable extent an uncharted sea. There are certain shores which are clear cut and definitely known, and on these one can speak intelligently and even a bit dogmatically, but there are large areas still shrouded in the mist of conjecture, and in regard to these our statements must be guarded.

Arthritis is a loose term which in medical parlance means something wrong with one or

more joints. We use it for pathological processes which are definitely infectious in origin, and yet we do not hesitate to use the term when speaking of joint conditions which we believe are the result of trauma, faulty metabolism, or toxins.



Fig. 3. Pyogenic hip with osteomyelitis of the neck of the femur.

The hip of course may be involved either alone or with other joints in any of the arthritic conditions seen in childhood. These may be acute, subacute or chronic and clinically run the whole gamut from vague "growing pains" to acute suppurative arthritis on the one hand or to a chronic deforming arthritis such as Still's disease on the other.

The acute cases can be divided into the acute rheumatic fever, acute synovitis and the acute pyogenic joints.

Acute rheumatic fever with chills, high fever, acid sweats, and red, swollen, tender joints is seldom seen in children, but may occur. However, a milder form of the same syndrome is fairly common and is often associated with tonsillitis, endocarditis and chorea. The rheumatic side of the syndrome may be limited to vague pains, sometimes muscular, sometimes articular, which are worse in damp weather. Not uncommonly one finds a patient with slight swelling and tenderness of one or more joints, moderate muscle spasm and pain on motion and a slight elevation of temperature. When several joints are involved one does not hesitate to make a diagnosis

of rheumatism, have the tonsils and adenoids removed, watch the heart, and predict that the joints will clear up entirely within a few weeks with or without treatment. The diagnosis is helped if one gets a history of the child's having had one or more similar attacks, as these rheumatic conditions tend to recur, particularly in the spring. However, if only one joint be involved and no previous attacks are recorded the diagnosis is more difficult.

Recently a boy of ten years was brought to me with the above symptoms, localized in the right hip. The pain and limp have been present off and on for five months. The parents are worried because the brother of this boy is at present under my care for a rather virulent case of tuberculosis of the hip. Did this patient have tuberculosis of the hip also? I think not. On physical examination there was moderate tenderness in the groin over the affected joint, but nothing else was noted. The X-ray was negative. I advised partial fixation with a flannel spica and moderate restriction of activity. The family lives about a hundred miles away, is of limited means, does not wish to leave the boy in a hospital here, but promises to return in one month. When next the boy is examined he may be entirely normal or he may present a definite tuberculous hip, or a coxa plana. Unless he has further trouble I shall probably never see him again.

The above is the type of hip of which we know very little. If pressed for a diagnosis we are inclined to say synovitis and let it go at that. If there had been a trauma the hip is said to be contused or sprained, though we know that the anatomy of the hip makes such injuries almost impossible. One reason for our ignorance is that these patients tend to get well without treatment. Many of them never consult a physician and very few of them get into the hands of an orthopedic surgeon. Not infrequently one of my friends among the pediatricians remarks in passing that he has a patient with slight limp and some pain in the hip or knee and that if it does not get better he will ask me to look the child over. Unfortunately for me most of them clear up and I never see them. If I do see them they usually have a definite process which has been going on for some months without treatment. Consequently my knowledge of these mild subacute hips which clear up without treatment is limited.

The acute exanthemata of childhood are occasionally accompanied or followed by joint complications. This is particularly true of scarlet fever where an acute synovitis either

during the disease or during convalescence is a rather common occurrence, especially in some epidemics. The joints become red, swollen, and painful. The hip is less often involved than are the wrists, elbows, ankles, or knees. The difficulty with these joints is that while most of them clear up and return to normal some of them become chronic and others suppurate. In an acutely inflamed joint it is difficult to determine whether or not suppuration has occurred. This is particularly true of the hip. It is deep seated and palpation and aspiration are difficult. When suppuration occurs the joint should of course be drained immediately. One has to be guided by the general condition of the patient, temperature, white count and the exquisite sensitiveness of the involved joint.

The statement made above that these post scarlatinal hips usually clear up and return to normal should be modified to the extent that in some of the more severe instances the hip may quiet down and permit of painless weight bearing, but the joint may be stiff and in a position of deformity.

I have in mind a boy of 9 years of age who came to see me with a diagnosis of tuberculosis of the hip. He had had a severe attack of scarlet fever about a year and a half before and during the illness had an acute arthritis of the hip. The hip symptoms had persisted and he had been treated for tuberculosis of the hip. On physical examination the hip was in a position of moderate flexion, adduction and internal rotation. There was considerable atrophy of the muscles of the extremity. An X-ray showed atrophy of bone, haziness of the joint, narrowing of the joint space and some erosion of the head of the femur. It was diagnosed as tuberculosis by a competent roentgenologist. Such a diagnosis was justifiable from the X-ray picture. It was a typical picture of a moderately advanced case of tuberculosis of the hip. Yet this was not tuberculosis, and the hip gradually loosened up under physiotherapy and exercise and six months later the boy walked without a perceptible limp. There was however some limitation of abduction, flexion and external rotation in the hip. This patient would probably be better off today if the hip had been drained during the stage of acute synovitis. These cases of acute synovitis of the hip should be put up in traction in a position of slight abduction to prevent the development of deformities such as occurred in the above case.

Acute pyogenic hips occasionally follow pneumonia and here the pneumococcus is the



Fig. 4. Atrophic arthritis affecting both hips.

offending organism. Staphylococci or streptococci may infect the hip from suppurative foci anywhere in the body. I have seen one of each type in children who were convalescing from radical mastoid operations. These acute pyogenic hips are usually dangerous to life and must be drained at once. They very often leave stiff hips. In severe or neglected cases osteomyelitis of the neck or epiphyseal separation may occur and marked destruction of the joint result. (Fig. 3.) If the patient survives the hip is usually ankylosed in abduction and external rotation.

In childhood there occurs a chronic progressive deforming arthritis which is characterized by atrophy of muscles and bones and contractures of the involved joints. The disease begins insidiously with little or no constitutional symptoms. It is noted that one or more joints are swollen and limited in motion. The joints then develop contractures and more joints are involved. The large joints are usually favored and the knees and hips are involved early. The swelling is almost entirely periarticular, there being very little fluid in the joints. The X-rays show only bone atrophy and periarticular thickening, until very late in the disease, when there may be erosion of cartilage or even bony ankylosis. (Fig.

4.) The disease pursues a chronic and relatively painless course. That is, the involved joints are not as a rule painful unless they are moved. The marked muscle atrophy renders the swollen and deformed joints very prominent. The etiology is unknown. This disease is supposed by many to be chronic infectious arthritis due to attenuated streptococci entering the blood stream from some focus such as the tonsils or teeth. The prognosis is grave. The arthritis may cease spontaneously at any stage, but it tends to progress with periods of remission alternating with the exacerbations until the child is hopelessly crippled.

Closely allied to this atrophic type is a form of chronic joint disease in children which was described by Still as a separate clinical entity. The picture is essentially that just described but there is also an enlargement of the lymph glands and spleen which is said to be characteristic. Whether the lymphoid hyperplasia is a part of the arthritis or not is a moot question. Some authors, particularly among the Germans, believe that the enlarged glands and spleen are the result of intercurrent infections.

The hip may be involved in any of the above polyarthritides but it is only a part

of the general disease and will not be dealt with in detail. All are of unknown etiology. The treatment is largely symptomatic but especial attention should be paid to the hygiene and general health of the child. In view of the prevalent belief that these chronic arthritides are due to focal infections, one is not justified in treating these cases without making a strenuous effort to find and eliminate possible foci of infection. However indiscriminate removal of teeth and tonsils should be discouraged and radical operations on the para nasal sinuses are not to be recommended unless definite pathology is evident. Where pathology is present it should be treated in order to benefit the general health of the patient. But removal of foci of infection does not cure chronic arthritis.

Vaccines either from stock cultures or autogenous from surgical foci or excised lymph glands are used in many clinics. The results of this form of therapy are not brilliant. The orthopedic treatment of these cases of chronic deforming polyarthritis in children is similar to that used in the adult cases of a similar type and resolves itself into the prevention and correction of deformities, physiotherapy of the involved joints, elimination and prevention of intestinal stasis, and physiotherapy and breathing and postural exercises for the purpose of bettering the patient's general health and increasing their resistance to any disease present.

Just as we have chronic hypertrophic arthritis of the hip (*malum coxae senilis*) in adults so do we have a chronic arthritis of the hip in children in which no other joint is involved. It is known as arthritis *seche* or dry arthritis by the French, and as arthritis *deformans juvenalis* in the German literature. The onset is insidious without fever or acute symptoms. Muscular atrophy is slight and the general health of the child is not affected. Abscesses do not form. Abduction and flexion deformity slowly develop. The X-ray shows erosion of the head, or of the acetabulum or of both with a certain amount of bony overgrowth around the articular margin. In some cases the roof of the acetabulum is eroded and subluxation occurs. In others the floor is deepened and new bone is laid down inside the pelvis to prevent perforation. The etiology is unknown. The treatment is largely symptomatic with especial attention to the prevention of deformity.

In hemophilics a chronic arthritis resulting from repeated effusion of blood in the joints is not uncommon, but the knees are usually the seat of the trouble and the hips are rarely

affected. The same tendency to involvement of the knees to the exclusion of other joints is shown in the chronic synovitis not infrequently found in children who are afflicted with congenital syphilis.

The above mentioned conditions are all rather rare, but if they are taken together they comprise a considerable percentage of the children who have difficulty with one or both hips. One should not make a definite diagnosis of tuberculosis of the hip in a child without excluding them. On the other hand it is to be emphasized that tuberculosis is the most frequent cause of disability of the hip in childhood and a progressive coxitis in a child should be considered tuberculous and treated as such until it recovers or is proven to be non-tuberculous.

435 University Club Bldg.

FREQUENCY OF INSULIN DOSAGE AND INCREASED THRESHOLD

H. E. MARCHBANKS, M.D.

PITTSBURG, KANS.

In the *Journal of the Kansas Medical Society*, January, 1924, I discussed briefly the frequency of the injection of insulin. Since the publication of that article I have had two very interesting cases under treatment that have caused me to give this subject very careful study. Both cases have been reported in detail in the December, 1924, *Journal of the Kansas Medical Society* but we believe them instructive enough to report their general progress since the time the paper was written, which was in August, 1924.

These cases were given as examples of amenorrhea in young diabetics and since then Case 1 has continued to menstruate every sixty days while Case 2 has had but one period in more than a year.

It is in severe cases like these that we are repeatedly reminded of the inestimable worth of the discovery of Banting and Best. More and more each day do I admire these men and while I have met only one of them, Charles Best, I feel that I know them. I know the many diabetics throughout the world must love them, for it is to these men they owe their happiness, their health and their lives. Let us not fail to give them praise whenever we can, for the value of insulin to these severe diabetics is beyond measure. Let us that have the privilege to use insulin not take too much credit on ourselves, for while without us the drug would be less useful, we must remember that we are only the servants that teach the patients how to live with their insulin and diet.

Mosenthal in the "North American Clinics," July, 1924, reports a case which demonstrates the advantage of repeated doses of insulin.

While I was visiting the clinics at Johns Hopkins Hospital in November, 1924, Dr. Wilmer M. Allen, resident in medicine, told me of one of their cases that had been in the hospital for some months, that did better with as many as four doses of insulin daily.

Joslin, at the Kansas City Clinics in October, 1924, stated that about five patients in 1000 required as many as four doses of insulin daily.

With these suggestions in mind I have endeavored to bring the blood sugar of these severe diabetics to normal by the use of four doses daily given at equal six hour intervals. This was done first in the hospital where we took the blood sugar just prior to the injection of insulin and the results were indeed encouraging. Later we allowed the patients to use the same method at home. The 24-hour amount of insulin on the same diet was reduced from 40 units daily to 27 units daily. We had first given the insulin in three doses, one before each meal, but found the blood sugar after 15 hours of fasting would be between 250 and 300 mg. The diet was carbohydrate 28, protein 38, fat 110, which in a girl of 17 years, weighing 60 kg., was as little as I felt she should have. I also thought 40 units daily was enough insulin if the doses were properly spaced.

The theory of this reasoning is that nature must evidently give off insulin normally from the pancreas in comparatively small amounts and even though the insulin secreting power of the pancreas were entirely gone there must be a way to put the insulin into the system at about the same rate that nature would do it. In other words, we must endeavor to keep the blood sugar at normal all the time instead of subnormal after our insulin injections and greatly above normal in the early hours of the morning. The patient feels better, however, with blood sugar a little high rather than a little low.

We found repeatedly, as did also Dr. Wilmer M. Allen, that the early morning blood sugar was high even though the insulin had been given as late as 11:30 p. m., where only three doses daily were given. On these same patients that would have a blood sugar of 300 mg. or more at 8 a. m., after 11:30 p. m. insulin we would get a reaction following the noon insulin of 15 units, at which time the blood sugar was found repeatedly to be as low as 35 mg. These extremes naturally made me a little discouraged. In an attempt to correct the condition we increased the last of the three doses of insulin to 20 units and decreased the

morning and noon doses; but not until we gave the four doses did we get the hoped for result, which was a normal blood sugar for the whole 24 hours.

Those who have advocated a single dose of insulin where 25 units or less are required daily, have undoubtedly found out by this time that repeated doses can be given with much happier results even though the patient must be injected an extra time or two in the day. (This seemed to be the argument in favor of the single dose.) I have found my patients willing to take the insulin at any hour I suggest and most of them do not worry about the needle at all because they get such comfort from its use.

I will give but a short review of these two histories.

Case 1. No. 2241. Miss G. M. W., a girl 19 years old, stenographer, had entered the hospital the first time in June, 1923, with the complaint of loss of weight, thirst, hunger, polyuria and loss of strength. She was soon diagnosed diabetes mellitus with a fasting blood sugar of 230 mg. per 100 c.c. of blood. After the ingestion of 61.05 grams of glucose the blood sugar arose to 500 mg. at the end of an hour and back to 390 mg. at the end of the third hour. One hundred ninety-one grams of sugar in 24-hour quantity of urine on admission. Her height was 61 inches and weight 84.5 pounds. Under insulin and diet treatment she has remained sugar free except for an occasional trace, and now weighs 103 pounds. She has been on diets containing as high as 77 grams carbohydrate, 60 of protein and 191 of fat, but most of the time has not been over carbohydrate 45, protein 40, fat 90.

Her blood sugar for the most part has been normal or nearly so. In April, 1924, however, her blood sugar shot up to 298 and her CO₂ went to 28.5 due to over-eating, but she was promptly put back in place by adjustment of diet and insulin. She went along nicely with blood sugar of 80 mg. and CO₂ 48 vol. per cent. on a diet of carbohydrate 50, protein 55, fat 130, and 30 units of insulin, until Nov. 8, 1924, when she took another shoot of blood sugar to 286 mg., apparently without any cause. I found, however, that she had been taking no exercise at all and had recently moved across the street from her work so she would have less distance to walk. On November 9 we reduced her to carbohydrate 40, protein 55, fat 100, with 4 units less of insulin. We told her to walk a mile each morning and by November 23 her blood sugar was 154 mg.; but by December 23 it had again reached 250 mg. We at once put her on a 6-hour feeding schedule, with insulin before each feeding, giving the largest dose at 11:40 p. m. Since then her blood sugar has ranged from 39 mg. to 63 mg., which is very satisfactory indeed.

The last test was made March 12, 1925. She feels well, has continued her walks and now walks 2 miles in 30 minutes each day. She also does her 8 hours work as a stenographer in a busy institution.

Case 2. No. 2693. Miss B. C., high school girl. She was 16 years old on admittance December 13, 1923. Her complaint at that time was weakness, enormous appetite, blurring of eyes, pain in region of appendix, which had been coming on in attacks every two weeks for the last three months. The

last attack was apparently more severe than previous ones. She was also quite constipated.

Her past history was negative except for frequent sore throat prior to removal of her tonsils three years previously.

Physical examination at that time revealed a young woman, well nourished and ruddy. Her weight was 122 pounds, height 66 inches; quite marked tenderness over appendix region; right rectus on gentle pressure became tense and rigid. Uterus was small and retroflexed. Examination was otherwise negative except for laboratory findings.

A single specimen of urine contained 11.2 per cent. sugar but the blood sugar was only 287 mg. Her tolerance was 287—400—571—400 mg. Blood count showed 9,900 white cells.

We decided the appendix was letting up and that the diabetes should be treated and patient made ready for operation later. She came in February 20, 1924, with another attack, and her urine being sugar free and her blood sugar and CO_2 being fairly normal, she was operated by Dr. C. A. Smith on February 25. Her recovery from this was uneventful and she left the hospital on the 13th day. Her diet on dismissal was carbohydrate 55, protein 71, fat 152, with 25 units insulin.

She adhered to her diet fairly well until April, 1924, at which time sugar appeared in her urine. Her blood sugar varied from 200 mg. to 350 mg. where it stood on July 30, at which time she took an extended visit to the Springs against our pleading advice to come into the hospital. Here some one had told her if she would drink the water she would not need to diet or take the insulin. In other words she strayed from the fold.

We next heard from her September 9, by long distance telephone through her physician at the Springs, who told us the patient was in a pre-coma condition and was unable to retain food. He stated that they had no laboratory equipment for blood chemistry so he was advised to carry out prescribed treatment using a catheter to empty, not partly empty, her bladder and test for sugar each three hours for his guide in insulin dosage and glucose intake.

She soon recovered sufficiently to be brought back to the Mt. Carmel Hospital on September 14, 1924, at which time her blood sugar was 298 mg. and CO_2 46 vol. per cent.

She responded to treatment but it was necessary to reduce her diet to carbohydrate 14, protein 17.5, fat 101.5, with 20 units of insulin to get her blood sugar down to normal. She left the hospital September 27, on a diet of carbohydrate 22, protein 33, fat 131.5, but her blood sugar remained high and by December 1, on the same diet it was 384 mg. At this time we advised her to come into the hospital again for another investigation and so we could put her on a six-hour feeding and insulin schedule.

We have been very much delighted with the results thus far. However, 100 days is but a short trial. Her blood sugar taken just prior to the time insulin was given on Feb. 3, 1925, was at 11:00 a. m., 93; at 5:00 p. m., 87; at 11:00 p. m., 130; on February 4th at 5:00 a. m., 101; CO_2 was 46.7. She had been getting carbohydrate 28.5, protein 37, fat 121.5, and 27 units of insulin. March 13 her blood sugar was 125 mg. on the same diet and insulin.

This is the longest period this patient has gone with a normal blood sugar and in one as young as she is we are hoping that the absolute rest for her pancreas might possibly regenerate it so that she can get at least some help from it later on.

I realize that these observations are over such short periods that we dare not draw conclusions, but having experienced the discouragement of a constant high blood sugar on a small carbohydrate intake and finding the helpful results by increasing the number of doses and lessening the daily amount of insulin, I thought it worth the effort to report these two cases.

This has given us another lesson that I think should not be overlooked and that is a truth given us by that great worker, Dr. Frederick Allen, before insulin was discovered. We must continue to underfeed these individuals and not build them up just because we think we can. We must keep the calories down in these patients of the second decade; they cannot take care of the carbohydrates, even with the insulin, that we at first thought they could. The pancreas will regenerate to some extent and we will go along nicely for a few weeks or months without urine sugar but without warning we will find a trace of sugar and an enormous blood sugar, which means that we have again insulted the pancreas and each insult lessens the chance for a good repair.

Many may say that we are unnecessarily alarmed about high blood sugar, but after one sees a few of these diabetics in coma he cannot but feel anxious when he knows the fasting blood sugar is around 250 or 300 mg. to the 100 c.c. of blood. This is perhaps more serious due to the fact that in most of these cases the threshold is raised so that frequently with a blood sugar of 300 mg. we still find no sugar in the urine. This makes us much more dependent on the blood sugar and CO_2 estimated for an index as to the patient's condition. It means that more sugar is carried in the blood than the symptoms would indicate and if the patient keeps burning the sugar by the use of his insulin he is able to use a greater amount of fat without the danger of acidosis than he would if the extra amount of sugar were not present. Unless the CO_2 is decreased I can see no great harm come from this high threshold and even then the CO_2 will be automatically raised as the insulin shoots the sugar out of the blood, so it might be that with the use of insulin in moderately large doses in these high threshold cases an acidosis is made less possible.

One dares not theorize too far on these things so early in the use of this new drug, but to say the least it is most fascinating to watch the progress of these individuals. Just what the future studies will bring forth we shall not attempt to prophesy. However, I believe the chances of advancement are more than worth the effort that the profession as a whole is putting into it.

THE JOURNAL

OF THE

Missouri State Medical Association

NOVEMBER, 1925

EDITORIALS

REDUCTION OF EXCESSIVE TAX ON PHYSICIANS

The American Medical Association is making a determined effort to have Congress reduce the taxes which are regarded as unjust by physicians. There are two forms of taxation on physicians which we are seeking to remedy, namely, the tax of three dollars for a permit to prescribe narcotics and the refusal of the Assistant Secretary of the Treasury to permit physicians to deduct from the income tax the expenses incurred when attending medical meetings and while taking postgraduate courses. Resolutions were passed at our Annual Meeting in Kansas City last May protesting against these unjust taxes and copies were sent to the President, to the Secretary of the Treasury and to all members of Congress from Missouri. Nearly all the Congressmen have signified their interest in our effort to obtain relief and have promised to cooperate with us to that end.

The tax requiring physicians to pay three dollars for a permit to prescribe narcotics is excessive. Furthermore, it is a war tax and should have been removed when other war taxes were abolished as practically all of them have been. The former tax of one dollar proved a sufficient amount to lay upon physicians, dentists and veterinary surgeons, for the administration of the law, therefore, Congress will be asked to amend the law by reducing the tax to one dollar.

The other relief we are seeking is to permit physicians to deduct from their income tax returns the expenses incurred when "attending meetings of organizations operated exclusively for scientific and professional purposes; expenses of postgraduate study." The law now permits the deduction of expenses incurred "in carrying on any trade or business" including "traveling expenses (including the entire amount expended for meals and lodging) while away from home in the pursuit of a trade or business."

When we transmitted a copy of our resolution on this question to the Secretary of the

Treasury we received a reply from the Honorable Garrard B. Winston, Acting Secretary of the Treasury, in which he said: "Attendance at medical meetings or postgraduate schools, while beneficial and even necessary in the broader sense, is wholly optional with the taxpayer and for that reason such expense is to be treated as a personal expense, and not an allowable deduction."

If it is to be held optional with the taxpayer engaged in the practice of medicine to make these trips in the pursuit of knowledge and skill so that he shall be more useful to the people in his community, it is most certainly equally optional with the business man seeking to replenish his stock of goods with new goods to travel to distant points, or order his stock from catalogues, by correspondence, or from salesmen who may call upon him. True, he may not be able to make such purchases quite as well as he could if he went away, or sent his buyers away to make them but neither can the physician who stays at home acquire professional knowledge and skill as well from books, medical periodicals, and chance medical visitors from out of town as he can by traveling to places where medical men are congregated for the purpose of discussing medical matters and to centers of postgraduate medical study. If the physician is to be handicapped by any such ruling as that proposed by the Acting Secretary, then the medical profession must insist that manufacturers, merchants, and taxpayers generally be similarly handicapped. Any other rule would be gross injustice to physicians as a class.

This and other phases of the proposition have been presented to the Secretary of the Treasury and will be argued before the Committee on Ways and Means of the House of Representatives by Dr. W. C. Woodward, of the Bureau of Legal Medicine of the American Medical Association. All of our members should be interested in obtaining relief on both of these propositions and we hope the members will write their Congressmen and ask them to use their influence for the adoption of these amendments by the Committee on Ways and Means and their passage by Congress.

TUBERCULIN IN THE DIAGNOSIS OF TUBERCULOSIS

Tuberculin was first introduced by Robert Koch in 1890. Since then it has been used as a therapeutic agent and as a diagnostic measure in tuberculosis. It is a product prepared from the tubercle bacillus, the active principle being the product of the organism. Its chemical nature is not definitely known but belongs to

the split protein group. There are many varieties of tuberculin but in general they may be classified under three groups, according to the manner in which they are prepared, viz: 1. Those containing only the soluble products of the tubercle bacillus in the media in which they are grown. 2. Those consisting essentially of the water insoluble substances. 3. Those containing both one and two.

Koch's old tuberculin, is an example of the first type; Koch's new tuberculin, of the second; and Koch's bacillen emulsion, BE, of the third.

When tuberculins are injected even in large doses into an individual free from tuberculosis no reactions or symptoms take place. If, however, tuberculosis is present, there follows within twenty-four hours a rise in temperature and a feeling of general malaise. This general reaction is accompanied by a local reaction at the point of infection, which becomes hyperemic. Tuberculous patients react to very minute quantities of tuberculin, but when used properly, no danger is incurred from the reaction, which is even held by some to be a positive benefit, if mild.

The two tests most frequently used are the cutaneous and subcutaneous. Koch's Old Tuberculin is employed.

The cutaneous method, devised by Von Pirquet, is as follows: On the cleansed forearm apply one drop of Koch's Old Tuberculin, undiluted, and one drop of concentrated glycerin bouillon for control about two inches apart. A slight abrasion of the surface of the skin is then made through these drops, sufficient pressure being applied to abrade the surface without drawing blood. If the patient reacts there will appear within twenty-four or forty-eight hours a papule surrounded by a hyperemic zone, one to one and one-half inches in diameter. In children under two years of age, a positive reaction is strongly suggestive of active tuberculosis. However, in the adult, a positive reaction does not necessarily indicate active tuberculosis. A negative test is of more value.

A two-hour temperature chart should be kept for several days preceding the subcutaneous test as well as during the test. An initial hypodermic injection of 0.1 mg. of Old Tuberculin is given, and if no reaction follows this, it is repeated in two days using 1 mg., and if that is negative it is followed in forty-eight hours by 5 mg., and if this is negative, a final dose of 10 mg. is given. Should a positive reaction take place it usually occurs within twenty-four hours, with a rise of temperature of at least one degree, headache, a local reaction and the appearance of rales or moisture in the suspected area of the lung in some cases. When a focal

reaction occurs, it is specific and nearly always means active disease. The danger of its use is slight. Reactions, even when severe, without focal changes may or may not mean active disease. Increase of physical signs occurs in about one-third of all cases. Tuberculin should be used diagnostically only in borderline cases, when all other means at our disposal fail to make a conclusive diagnosis of active tuberculosis. Patients running a temperature over 99.5 F. are not suitable for tuberculin subcutaneously for diagnosis.

In practice, exposure to infection, characteristic symptoms, such as hemoptysis, dry pleurisy, localized persistent rales at one apex and afternoon rise of temperature, are diagnostic data of far more importance in clinical tuberculosis than those derived from the tuberculin test alone.

A positive general reaction when only doubtful symptoms of tuberculosis are present is of uncertain value, unless the pulmonary symptoms and signs are definitely increased during the reaction.

A negative general reaction is the strongest evidence we have against active tuberculosis. A positive focal reaction in an individual having fever is one of the strongest evidences we have for active pulmonary tuberculosis. Tuberculin for diagnosis is a valuable aid but should be used with extreme caution and only when other diagnostic measures have failed and there still remains a suspicion of active tuberculosis.

TWENTY-FOURTH COUNCILOR DISTRICT MEETING

On September 1 the meeting of the Twenty-Fourth Councilor District was held at Poplar Bluff with the Butler County Medical Society as host, the Councilor of the District, Dr. T. W. Cotton, of Van Buren, presiding. There were two meetings, one during the afternoon being devoted to the reading and discussion of papers. At this meeting Dr. W. C. Gayler, St. Louis, made a splendid talk on obstetrical problems which brought out a very interesting discussion. Another paper that was highly instructive was by Dr. Neil Moore, St. Louis, on urological problems. Our President, Dr. Emmett P. North, St. Louis, gave the members an intimate account of the activities of the board of health and the difficulties encountered in the control and prosecution of illegal practitioners and those who had obtained licenses through fraud and false representations.

At the evening meeting Dr. Gayler gave a talk on prenatal care of the mother and child, describing the efforts of all physicians, and par-

ticularly obstetricians, to induce prospective mothers to place themselves in the hands of a physician soon after conception and regulate their lives under his direction. In this way many of the ills of childbirth can be avoided and the newborn babe enter life with better prospects of a safe journey through the early period of child life.

Dr. North also addressed the audience, making a plea for a more careful choice of representatives in the legislature and a more intelligent consideration of bills affecting the health of the people and the licensing of persons desiring to practice the healing art. Other addresses were made by State Senator Dwight H. Brown, Poplar Bluff; Hon. W. H. Meredith, president of the Chamber of Commerce, Poplar Bluff; Hon. Edgar Hammons, mayor of Poplar Bluff, and the secretary of the Association, Dr. E. J. Goodwin, St. Louis.

AMERICAN PUBLIC HEALTH ASSOCIATION

During the session of the American Public Health Association at St. Louis, October 19-22, the cause of preventive medicine was very successfully presented to the people through the newspapers quoting a large number of the papers presented at the meeting. Every phase of public health activity was discussed at the session, there being about one hundred and twenty-five papers and reports. One of the interesting developments was the condemnation of a law in Iowa, requiring public schools to provide for thirty cubic feet of cold air per minute to each room. It was said that fifteen cubic feet of cold air is ample for the purpose of giving adequate change of atmosphere and this could be secured by opening windows and simple contrivances. Thirty cubic feet of air, it was stated, required the maintenance of a high degree of temperature in order to prevent cold drafts with their consequent ill effects upon the children.

The shortage in public health workers in federal employment was deplored and it was charged that the cause of the shortage was due to political influence in the removal and appointment of health officers. Competent men and women are prevented from applying for positions because of the uncertainty in tenure of office.

The Association is performing a splendid service in the education of the people on preventive medicine and the protection of health, and the St. Louis Session was pronounced a highly successful Session.

MEMORIAL TO DR. WILLIAM F. KUHN

On October 11 the Masons of Kansas City conducted a memorial service in honor of the late Dr. William F. Kuhn. All Masonic bodies in the city participated in the services and addresses were delivered in memory of the many good deeds of this well beloved man. At the time of his death Dr. Kuhn held the highest Masonic office in the United States. He was for many years one of the most prominent alienists in this section of the country.

PHYSICAL EDUCATION FINANCES

Thirty-three states in the last ten years have passed laws providing for the physical education of all children in the public schools. The last Missouri legislature, however, failed to appropriate for this work. This has made it necessary to raise from those interested in child welfare the funds to carry on the work.

The state director, Professor Henry S. Curtis, has thus far received \$3000 from Mr. William Volker, of Kansas City, and about \$1000 from various other donors, including \$250 from the Public School Athletic League of Kansas City. The Department has been promised \$2000 from the Missouri Tuberculosis Association and unofficially different sums from the District Federations of Women's Clubs, the American Legion of Kansas City, the Parent Teachers' Association, the Missouri State Medical Association and the teachers' associations of Kansas City and St. Louis. It would seem safe to estimate these funds at eight or nine thousand dollars.

Several of these organizations have also promised to appoint committees and use their influence to see that the appropriation does not fail again.

Besides its regular activities the Department of Physical Education has employed during the past summer a number of physician directors from the teacher's colleges to work in the county plan meetings and has paid them out of the funds raised.

In order to carry on until April, 1927, eight or nine thousand dollars are needed. This is to cover the issuing of syllabi and bulletins and the organization and supervision of the health teaching, physical education, and playground activities of 750,000 children.

REASONABLE

The physicians of Washington, Missouri, recently announced to their patients, through the newspapers and circulars that they would expect the people to pay them for pro-

professional services if they were able to do so. The circular requested those who are able to pay and have not in the past done so or will not in the future pay for the services rendered, not to call the signers of the notice in the future. The letter reads:

"Having practiced in Washington, Mo., for one to thirty-five years, or more, with several thousands of dollars unpaid on our books, (charity work not included) hereafter all charge accounts are due and payable the first of each month, or upon rendering a bill.

We are compelled to maintain an office, pay drug bills, phone, light, gas, tires, etc., monthly or "for strictly cash." In consequence we do not think it just that we should render our services and supply drugs gratis, or on an indefinite payment plan. Patients who are unable to pay—real charity patients—who seek our services, will receive as prompt and as careful attention as we are able to give. Those who are able to pay and who do not, and will not, will oblige us by not calling upon us.

We are sending a copy of this letter to each of our patients to whom it applies. It is not our intention or desire to offend anyone, nor do we expect those who pay to take offense. Those who can pay and will not, we do not want; which will give us more time to devote our energies to those patients desiring our services who meet their obligations."

NEWS NOTES

Dr. J. Curtis Lyter, St. Louis, will be the guest of the Kansas City Academy of Medicine, November 27, and deliver an address on "Experimental and Clinical Aspects of Certain Lung Conditions."

Dr. E. J. Lee, Jr., St. Louis, has been appointed superintendent of the city sanitarium of St. Louis to succeed Dr. Chas. H. Shumaker. Dr. Lee formerly practiced in St. Louis but has been in the Government service for the past eight years.

Dr. John L. Tierney, St. Louis, addressed the Tri-County Medical Society at Monmouth, Ill., October 1, on "Some Problems of Cardio-vascular-Renal Disease." On October 28, he read a paper before the Seventh District Medical Society of Indiana, at Martinsville, Ind., entitled "A Consideration of Cardio-vascular-Renal Diseases."

Dr. George C. Mosher, Kansas City, was elected president of the American Association

of Obstetricians and Gynecologists at the Session held in Hot Springs, Va., September 18. This is the first time that the presidency has been conferred upon a member living west of the Mississippi River. Dr. Mosher has been chairman of the Committee on Maternal Welfare of the Association for five years.

The next meeting of the Association will be held in Chicago, in September, 1926.

On October 10 the St. Louis Gynecological Society had as their guests the Chicago Gynecological Society, twelve of the Chicago members attending. They breakfasted at the University Club as guests of the St. Louis Fellows and then attended a clinic at Washington University Medical School. Luncheon was served at the refectory after which they were taken to St. Mary's Hospital where a clinic was given by the Gynecological and Obstetrical Department of St. Louis University. At seven o'clock a dinner was given the Chicago physicians at the University Club at which time papers were presented by Drs. Carey Culbertson, H. F. Lewis and G. W. Reis, of Chicago.

Dr. Elizabeth L. Broyles, St. Joseph, has been appointed Resident Physician at Wellesley College, Wellesley, Mass., where she will supervise the health of the students. There are about 1500 young women students at Wellesley. Dr. Broyles was selected for this position by the Governors of Wellesley College after an interview with her although she had never made an application for the position. She is the daughter of Dr. F. H. Broyles, of Bethany. She graduated from the University of Nebraska School of Medicine in 1923 and has been practicing in St. Joseph since last November.

Dr. Joseph S. Halsted, Breckinridge, 107 years old, died at his home September 14. He had been a resident of Missouri since 1841 and had voted at practically every election during that long period of time. Last year the election officials paid him the compliment of going to his bedside when he was unable to go to the polls and accepted his vote. He was the oldest living Mason in the country if not in the world and the oldest living physician. At the meeting of our Association in Springfield in 1924, Dr. Halsted was elected an honorary member.

During the meeting of the Kansas City Clinical Society, October 7, the graduates of the Ensworth Medical College organized a medical college alumni and arrangements were made for an annual meeting. All professors and

graduates of the Ensworth, Central and the Northwestern Colleges of St. Joseph are requested to send their names to the secretary. Dr. Charles G. Geiger, St. Joseph, was elected president; Dr. J. H. Buckles, Kansas City, Kas., vice president; Dr. Charles Wood Fassett, 115 East 31st Street, Kansas City, Mo., secretary-treasurer.

Through the generosity of Mr. William Volker and Mr. Frank C. Niles, Kansas City, a free hospital will be founded in Kansas City to care for ill and crippled Negro children. These gentlemen have donated \$65,000 for the erection of a two story addition to the Wheatley Hospital which has been in operation since March, 1922, through a gift of Mr. Niles. It is conducted largely in connection with the Children's Mercy Hospital of which Dr. Katherine Richardson is one of the founders.

The new hospital for the Negro children will be modeled on the plan of the Mercy Hospital and will probably be staffed by Negro physicians and nurses with a consulting staff of white physicians.

A new hospital has been added to the group of Bethesda hospitals in St. Louis through the bequest of Mrs. Elizabeth Dilworth, St. Louis, who died last March. In her will Mrs. Dilworth directed that Oak Manor, a very large and handsome residence costing when erected about \$125,000 with the surrounding grounds and woodlands, be turned over to the Bethesda Corporation immediately after her death. She left an estate estimated at \$350,000, the income of which is to be given to her relatives during their lives. After that the entire estate will revert to the Bethesda hospitals. Oak Manor has been transformed into a hospital for convalescents and was formally opened last month. Dr. Edward W. Saunders, St. Louis, is president of the Bethesda charities.

The Jackson County Grand Jury sitting at Kansas City will investigate the medical diploma mill scandal. The grand jury convened September 22 and was instructed by Judge Nelson E. Johnson to indict persons found guilty of fraud in obtaining licenses or diplomas. In his instructions Judge Johnson said:

"There have been many charges of late that men have received diplomas to practice medicine in this state who are not entitled to receive them, and that men have received licenses to practice medicine in this state who are not entitled to receive licenses.

If these charges are true it is hard to conceive of a greater crime, because into the hands of these men fall the woes and the ills of our

citizens. If a man is not qualified or entitled to practice medicine you can see what happens to the sick and unfortunate ones that come under his care.

Now, gentlemen, I want you to investigate this thing and go to the bottom of it. If you find that in your judgment any crimes have been committed in either the granting of diplomas or the issuance of licenses, or anything in that connection, it is your duty to indict those people that are guilty of that kind of thing."

OBITUARY

GEORGE LOUIS KOCH, M.D.

Dr. George L. Koch, Kansas City, died suddenly from injuries sustained from an automobile accident, September 2, 1925, at the age of 58 years. He was a graduate of the Missouri Medical College, St. Louis, 1891, and was a member of Jackson County Medical Society. Fellow of the American Medical Association, member of the staff of St. Mary's Hospital, and was active in the Masonic Lodges.

He was greatly loved and his loss will be keenly felt not only by his professional and social friends but by all the officers and employees of the Missouri Pacific Railroad, which he served for thirty years.

JESSE ROBERT TALLEY, M.D.

Dr. Jesse R. Talley, Mountain Grove, died at his home September 9, 1925, aged 63 years, as a result of an acute attack of appendicitis. Dr. Talley had for twenty-eight years practiced medicine in Wright County, and although in recent years his actual vocation was farming he gave freely of his time and talent for the alleviation of human suffering. Dr. Talley was a graduate of the Louisville Medical College, 1888. He was a member of the Wright-Douglas County Medical Society.

ENCINAS C. CALLISON, M.D.

Dr. Encinas C. Callison, Kirksville, graduate of the Kentucky School of Medicine, 1889, died of pneumonia, September 14, 1925, in the Grim-Smith Hospital at Kirksville. Dr. Callison, who at the time of his death was 59 years old, had long been a member of the Adair County Medical Society and was a Fellow of the American Medical Association.

NATHANIEL L. WHIPPLE, M.D.

Dr. Nathaniel L. Whipple, Nevada, aged 86 years, died of senility, September 12, 1925.

Dr. Whipple was retired from practice at the time of his death but held the position of county coroner of Vernon County. He was a graduate of the Washington University School of Medicine, 1865, and was an Honor Member of the Bates County Medical Society and the Missouri State Medical Association.

JOHN D. PIFER, M.D.

Dr. John D. Pifer, Morgantown, West Virginia, formerly of Joplin, Missouri, died August 25, 1925, after a long illness. Dr. Pifer was forced to leave Joplin two years ago for West Virginia on account of ill health. He was a graduate of Bellevue Hospital Medical College in 1888. He was a former member and at one time Secretary of the Jasper County Medical Society.

MINERVA M. KNOTT, M.D.

Dr. Minerva M. Knott, formerly of Jefferson City, a graduate of the University of Michigan Medical School, Ann Arbor, 1895, died July 8, 1925, at a hospital at Glendale, California, following an operation. She was 58 years old. Dr. Knott had been a full time officer in the United States Public Health Service for several years. She was a member of Pettis County Medical Society.

SAMPSON J. ROBERTSON, M.D.

Dr. Sampson J. Robertson, McDowell, a graduate of the St. Louis College of Physicians and Surgeons, 1893, died suddenly July 3, 1925, from a heart attack. He was 58 years old. He was a member of Barry County Medical Society.

LEWIS ROBERT MONDAY, M.D.

Dr. Lewis R. Monday, of Richland, graduate of the Washington University School of Medicine, 1904, died at his home, August 16, 1925, after a long illness. Dr. Monday was 53 years old and was a member of the Pulaski County Medical Society.

BOOKS FOR LEISURE MOMENTS

"Soundings," by A. Hamilton Gibbs (Little Brown & Company) is now in its fortieth thousand and shows promise of going of going on up to its fiftieth. The title of the book is taken from the quotation: "Life is an unchartered ocean. The cautious mariner must needs take many soundings ere he conduct his barque to port in safety." The story itself is English, dealing with an English girl, Nancy Hawthorne, who has been raised by an artist

father, Jim Hawthorne, in a small English village. Jim Hawthorne allows Nancy a year's travel in which to discover the world and life. Nancy falls in love with Bob Whitaker, a young Oxford student who seemingly does not reciprocate and Nancy returns to her father who has been injured in an automobile accident. In the end the Great War brings Nancy and Bob together and all ends happily.

The companionship between Nancy and her father is the strongest part in the book, although one feels that Gibbs intended Nancy's love affair to hold the dominant place. Jim Hawthorne treats Nancy as a pal and an equal, all the time watching her with a father's loving care. There is nothing of the parental superiority in Jim's attitude and the philosophy he expounds is well worth the price of the book. In explaining to Nancy the world's view of the illegitimate child he says:

"You know that wolves will turn on a weak or wounded member of the pack and tear it to bits and eat it. Humans are just the same. Our cruelty is a little more refined, perhaps. At the cry of illegitimacy we turn and rend the woman who had dared to disobey the pack rules by being found out. And as if that were not enough, we proceed to brand the child for life. My dear, you would think that charity might be found here in Brimble, where men and women live pretty close to nature, and yet do you know what they call the Judkins child? —'The Judkins bastard'—and we call ourselves Christians and send out missionaries to teach the savage brother love. When a prophet comes among us, like Shaw and shows us up with his bitter truths all we do is to laugh and applaud and say 'How clever!'"

"Soundings" is being made into a play and will be offered in the fall season. It will make a strong play, stronger perhaps than the book for the characters of Nancy and Jim are appealing and will be more so over the footlights. It is to be hoped that Bob Whitaker, the lover, will be a little more clearly drawn in the play than he is in the book. He is a little too quiet and too elusive in the book to make one enthusiastic about him.

It is regrettable that Mr. Gibbs will not dramatize the book, but he has refused on the ground that he is unfamiliar with stage technique and has relinquished the honor to someone else. The book is interesting from first page to last, giving one a lot of food for thought with no dry moments, and Nancy's many adventures as she takes her "soundings" makes attractive reading.

P. B.

More and more is the medical profession giving to the world books in which are discussed diseases of the mind and body which only a few short years ago the lay individual

felt was a closed subject to him. As a means of education and as a means of prevention such books are worth many times their price.

"When Life Loses Its Zest," by Abraham Myerson, M.D., (Little Brown & Co.) is one of the recent additions to this list. In it Doctor Myerson discusses boredom, the strange malady that is met by almost all physicians today in their work with returned soldiers and with the countless hundreds in this jazz mad age. Doctor Myerson calls it by the proper medical name—anhedonia—and analyzes it from the physician's standpoint.

H. Addington Bruce in an editorial introduction tells just why Doctor Myerson is so ably suited to write a book of this nature. In part he says: "His clinical experience has been most extensive, including in its scope not only a private practice but association with a number of institutions for the mentally ill, first in St. Louis, afterward in Boston and vicinity. Besides practicing neurology he also teaches it, being professor of neurology in Tufts College Medical School and, in Simmons College, he lectures on social psychiatry."

As Addington Bruce points out, Doctor Myerson is not writing from the viewpoint of a theorist but of a clinician. The book is written with an air of authority, of complete understanding of the individual and his problem. A person suffering from this malady may easily recognize the symptoms, the causes and the consequences, and, if he reads the book with understanding, he may be able to convert this wearisome attitude into one of energy and enthusiasm.

One of the strongest points brought out in the book and one that should recommend itself to every social service worker and every individual dealing with humanity is the fact that in our factories and industries there has been a narrowing of opportunity for satisfying the creative instinct. The ever monotonous working day is becoming more and more prevalent and he says:

"It plunges such an individual into a ruminating, introspective life which bores beyond words to express it and which makes him desperately seek entertainment, stimulation, and new kinds of excitement of one type or another."

The book covers a great deal of ground in its 213 pages and covers it with a good vigorous style. It brings a message to all, not only the tired adult, but to the child, for Doctor Myerson devotes several pages to parents and discusses the prevention of anhedonia in children. All in all the book is exceedingly worth while both for the education and the help it will bring to the lay reader and the interesting reading it will make for physicians.

P. B.

It seems to be taken for granted nowadays that every medical man should not only be up-to-date in his chosen specialty, but that he should always be on call to fill in a foursome at golf or take a hand at bridge. So if we were to take a peep at our doctor's private library we would probably find, lined up with Osler and the latest publications from the Mayo Clinic, Vardon and Jim Barnes on golf, Work and Foster on auction bridge.

Modern Bridge Tactics (Dodd, Mead & Co.) the latest manual by Foster is not exactly a beginner's book but is a careful analysis and description of the latest ideas and conventions of auction. To our mind it is one of the most concise and helpful books we have seen on this subject, and should be in the library of every physician who likes to slip into a game at the club or has to help his wife out when the couple next door unexpectedly drop in (as previously arranged by the aforesaid better half). Bridge is a game that has to be shared by a partner; one may be a dub at golf without serious objection by others but bridge is a different matter, and a surgeon who would let down his partner by bidding without top honors might be suspected of doing a laparotomy without asepsis.

R. L. T.

In "Twisted Tales" (Henry Holt & Company) Christopher Ward has given us a group of parodies that combine real criticism with interesting reading. We meet Fanny Hurst's "LummoX" under the heading "StummoX" by Fannie Wurst, and also James Oliver Curwood's "Alaskan" under the caption "A Baked Alaskan" by James Oliver Dogwood. There are parodies of Wells, Strachey, Van Vechten, Harold Bell Wright, Conrad, Zona Gale, Gene Stratton Porter, May Sinclair and others.

The chapter "Six Authors in Search of a Character" will be interesting to the readers who remember the characters of long ago. In this chapter we meet the celebrated Trilby and also Tom Jones, Tess of the D'Urbervilles, Elsie Dinsmore, Becky Sharp and Little Nell enter the room to be passed on by the six authors. These writers have gone to the Author's Intelligence Office in search of new characters and the manager brings forth the characters from the pages of long ago. If one can imagine the present day Scott Fitzgerald interviewing the once famous Trilby and Gene Stratton Porter talking to Elsie Dinsmore, one can appreciate the ever ready wit and contagious humor found in Mr. Ward's book.

The parodies are well written, interesting and humorous and provide an evening's enjoyable reading.

P. B.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, FOR 1925

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID THE STATE ASSESSMENT FOR ALL
THEIR MEMBERS)

- Benton County Medical Society, October 10, 1924.
Chariton County Medical Society, December 20, 1924.
Camden County Medical Society, December 29, 1924.
Madison County Medical Society, January 21, 1925.
Montgomery County Medical Society, January 22, 1925.
Clark County Medical Society, January 30, 1925.
Cape Girardeau County Medical Society, February 10, 1925.
Dent County Medical Society, February 19, 1925.
Webster County Medical Society, February 26, 1925.
Ste. Genevieve County Medical Society, March 24, 1925.
Ralls County Medical Society, April 2, 1925.
Caldwell County Medical Society, April 4, 1925.
Taney County Medical Society, April 6, 1925.
Christian County Medical Society, April 15, 1925.
Monroe County Medical Society, April 20, 1925.
Cooper County Medical Society, April 28, 1925.
Morgan County Medical Society, May 7, 1925.
Laclede County Medical Society, May 29, 1925.
Scott County Medical Society, June 20, 1925.
DeKalb County Medical Society, July 21, 1925.
Carter-Shannon County Medical Society, August 24, 1925.
Ray County Medical Society, August 28, 1925.
Platte County Medical Society, September 21, 1925.
Saline County Medical Society, October 15, 1925.
Crawford County Medical Society, October 16, 1925.

CALDWELL COUNTY MEDICAL SOCIETY

The Caldwell County Medical Society met in Kingston, October 1, 1925, at 2 p. m., in the County Court Room. The weather and the roads during the months of August and September had been so bad the meetings for those months were postponed until this meeting.

Present at the meeting were Drs. Tinsley Brown, Hamilton, Secretary; J. E. Gartside, Wm. S. Shouse, Kingston; O. N. Thompson, Breckenridge; Clifford H. Wilbur, Polo. In the absence of the president, Dr. Gartside presided over the meeting.

The minutes of the last meeting were read and approved.

A baby of six months was presented by Dr. Thompson. The difficult delivery of the baby, a breech presentation, was thought to be the cause of the imbecility or moronity of the child. The fontanels were nearly closed. The case brought out considerable discussion and was taken under advisement for another examination.

An amendment to the by-laws was offered by changing the annual dues from \$6.00 to \$9.00, the State Association dues being \$8.00 per year. The

amendment was read and laid on the table until the next meeting for action.

The Society adjourned to meet in Hamilton at the regular October meeting time, this session being a called meeting.

TINSLEY BROWN, M.D., Secretary.

CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society was entertained at its regular quarterly meeting by Dr. and Mrs. A. H. Baldwin at the Baldwin Lake Club House on Thursday, September 10, 1925. An interesting and inspiring program was presented to the members of the society and their guests. Dr. Clinton K. Smith, Kansas City, gave an enlightening discussion of urological diagnosis and Dr. Damon Walthall, Kansas City, read a very excellent paper on Immunization and Treatment of Scarlet Fever.

Following the program all the members of the Society and their guests were bountifully served to a picnic supper by the members of the Woman's Auxiliary to the Cass County Medical Society.

W. L. VEIRS, M.D., Secretary.

SOUTHEAST MISSOURI MEDICAL ASSOCIATION

The Southeast Missouri Medical Association opened its 49th Annual Meeting at Poplar Bluff, October 6, with a large attendance of members and a number of distinguished visitors.

The scientific sessions were held in Elk's Hall, beginning at 10 a. m., Tuesday, October 6. After disposing of organization matters, Dr. A. L. Kinsley, Kansas City, a representative of the State Board of Health, presented a paper on "Anthrax of Animals and Its Relation to Public Health." Following a general discussion a vote of thanks was extended to Dr. Kinsley for his courtesy in coming before the society.

At the afternoon session the following presented the papers: Drs. A. H. Hamel, St. Louis, "Some Thoughts on Pathology and Treatment of Hypo and Hypertension." W. L. Brandon, Poplar Bluff, "Why Do Inguinal Hernias Recur?" W. F. Grinstead, Cairo, Ill., "The Dernier Resort Surgical Patient." O. A. Smith, Farmington, "Noncongestive or Simple Glaucoma." A very interesting general discussion followed.

Telegrams of sympathy were sent to Drs. Robert T. Henderson, Jackson and John P. Sebastian, Williamsville, two of the older members of the society who were unable to attend because of illness.

At 6 p. m., a banquet was spread for the Association in the main dining room of the Hotel Duck-er through the courtesy of the Butler County Medical Society, after which we adjourned to the high school auditorium for the evening session—the regular open session when the public is invited to sit with us and take part in the proceedings. A large audience had assembled when the meeting opened at 7:30 p. m. After some beautiful music by the Poplar Bluff Choral Club, the address of welcome was delivered by Dr. A. R. Rowe, Poplar Bluff, and the response for the society by Dr. G. W. Vinyard, Jackson. The president's address followed by Dr. John D. Van Cleve, Malden, after which Dr. Ellis Fischel, St. Louis, delivered a most interesting lecture on "Some Phases of the Cancer Problem," illustrated by lantern slides.

On Wednesday morning we were given a double treat in papers by Dr. W. McKim Marriott, St. Louis, on "Some Problems in Infant Feeding," and

lecture by Dr. M. F. Arbuckle, St. Louis, on "Endoscopy in the Diagnosis and Treatment of Disease of the Lower Air Passage," with special reference to the removal of foreign bodies from the bronchi by use of the bronchoscope. An exhibit of articles so removed was shown by lantern slides.

Wednesday afternoon two symposiums were presented: "Focal Infection," in three sections by Drs. A. R. Rowe, Carl Zimmerman and W. B. Hays; "Ulcer of the Cornea," in three sections by Drs. H. Cunningham, Wm. Spaulding and W. H. Yount. Discussions were opened by Drs. Bennett and Dieckmann.

The following officers were elected for 1926: President, Dr. D. H. Hope, Cape Girardeau; vice president, Dr. W. C. Dieckmann, Dexter, corresponding secretary, Dr. E. J. Nienstedt, Blodgett; recording secretary, Dr. W. S. Love, Charleston; treasurer, Dr. W. R. Goodykoontz, Desloge.

The society adjourned to meet at Cape Girardeau, October, 1926.

W. S. LOVE, M.D., Secretary.

ST. FRANCOIS COUNTY MEDICAL SOCIETY

The St. Francois County Medical Society held its first fall meeting at Flat River, September 22. The inclemency of the weather prevented many of the members from reaching the meeting but the local physicians were present. There was a general discussion of medical conditions in the county and a motion prevailed requesting the president of the Association, Dr. North, and the Secretary, Dr. Goodwin, to meet with the society next month.

E. C. O'BRIEN, M.D., Secretary.

ST. LOUIS COUNTY MEDICAL SOCIETY

The regular meeting of the St. Louis County Medical Society was called to order October 14, at the home of Dr. J. A. Townsend, House Springs, at 3 p. m., by the president, Dr. Otto W. Koch.

The minutes of the September meeting were read and approved.

Dr. Armin C. Hofsommer, of Webster Groves, was elected to membership. Dr. Chester A. Poe, Wellston, presented application for membership and was rejected. Transfer from the Green County (Ill.) Medical Society was presented by Dr. R. E. Gaston, Webster Groves. On vote Dr. Gaston was elected to our society and the transfer accepted.

Amendments to the by-laws were offered so that Chapter 5, Section 1, will read: "The admission fee, which must accompany application shall be \$11.00, etc.," and Section 2 will read "The annual dues shall be \$11.00, etc." Heretofore the dues have been \$8.00 but since the State Association dues have been increased the amendment was necessary. A copy of the amendments were sent to each member and vote will be taken at the next meeting.

A very interesting paper, "Urology and Its Relation to the General Practitioner," was presented by Dr. J. Hoy Sanford, St. Louis. Various tests and methods of differentiation between abdominal and retro-peritoneal conditions were ably discussed. A clinical history with X-ray of the Ptois of the Kidney was presented by Dr. J. H. Armstrong and discussed by Dr. Sanford.

Delightful refreshments were served by our host and hostess, Dr. and Mrs. Townsend, after adjournment of the scientific meeting. All the members present were loud in their praises of the afternoon meeting and the refreshments.

CLYDE P. DYER, M.D., Secretary.

WOMAN'S AUXILIARY

OFFICERS AND COMMITTEES

President, Mrs. M. P. Overholser, Harrisonville.
 Chairman of Organization, Mrs. Willard Bartlett, 53 Westmoreland Place, Saint Louis.
 Corresponding Secretary, Mrs. J. G. Montgomery, 524 Knickerbocker, Kansas City.
 Recording Secretary, Mrs. A. B. McGlothlan, 821 North 24th Street, St. Joseph.
 Treasurer, Mrs. C. T. Ryland, Lexington.
 Chairman of Legislation, Mrs. George E. Bellows, 3239 Euclid Avenue, Kansas City.
 Chairman of Finance, Mrs. John C. Parrish, Vandalia.
 Chairman of Education, Mrs. E. T. Gibson, 6425 Wornall Road, Kansas City.
 Education Subchairmen: Hygeia, Mrs. D. S. Long, Harrisonville; University Extension Service, Mrs. Guy L. Noyes, Columbia.

BUTLER COUNTY AUXILIARY

On Wednesday morning, October 7, the Woman's Auxiliary to the Butler County Medical Society was organized at Poplar Bluff, with nine members present. The following officers were elected: President, Mrs. L. B. Knecht; vice president, Mrs. Wm. Spaulding; secretary-treasurer, Mrs. J. W. McPheeters.

The Southeast Missouri Medical Association was in session at Poplar Bluff at the time and the new auxiliary signaled its organization by entertaining the wives of the visiting physicians in the afternoon and later in the day the members of the Association. The auxiliary reports a fine spirit of cooperation and understanding among its own members and with the medical societies of the district.

CASS COUNTY AUXILIARY

In August the Woman's Auxiliary to the Cass County Medical Society sponsored the free examinations of the boys and girls of the County Farm Clubs competing for entry to the state health contest for boys and girls at the Sedalia State Fair. Auxiliary members acted as secretaries to the physicians making the examinations.

September Meeting

The September meeting of the Auxiliary was held in Pleasant Hill, at the residence of the president, Mrs. A. H. Baldwin. After a short business session, the women adjourned to the Baldwin Lake Club House to listen to the program of the Cass County Medical Society. This program was thoroughly interesting to the Auxiliary in spite of its scientific and technical character. As in June, the meeting was followed by a luncheon served by the Auxiliary. Mrs. W. W. Duke, Kansas City; Mrs. L. L. Smith, Urich; Mrs. Katherine Waggner, R. N., and Miss Willella Deacon, Harrisonville, were guests. The next meeting will be held in Harrisonville in December.

SALINE COUNTY AUXILIARY

At the request of the Woman's Auxiliary to the Saline County Medical Society, the Marshall Cham-

ber of Commerce incorporated a Child Health Conference in the program of the Saline County Fall Festival, held in Marshall, October 7, 8, 9, of this year. At the close of this celebration the superintendent of the Marshall city schools volunteered the comment that he considered the Conference "the hit and big success of the Festival."

Mrs. W. M. Bickford, president of the Saline County Auxiliary, makes the following report of the Conference which should inspire other of our auxiliaries to emulate Saline County's fine example.

Child Health Conference

The Child Health Conference was made possible for Saline County by the Marshall Chamber of Commerce making it a part of their Fall Festival. The Division of Child Hygiene of the State Board of Health sent Dr. Thiehoff and Miss Pearl McIvor to conduct the conference. Miss Annie Thompson, R.N., of the International Shoe Factory, was released from their infirmary to take charge of the registering and other detail work and was assisted by four local nurses, all of whom worked most untiringly. The Saline County Medical Society also assisted, always having one of its members present to do part of the examining. The weather was most unpleasant with bad Missouri roads and local showers, but in spite of that 224 children were examined during the three days. We had four cars which called for and returned mothers and children who had no other way of attending. The Metropolitan Life Insurance agent was most helpful. He had films shown on two nights, "Working For Dear Life," and "One Scar or Many." Our movie manager flashed the announcement for a week besides running the films free. The insurance company also had fifteen hundred dodgers printed and distributed in the towns and in every rural postbox and furnished literature on prevention of diseases. The literature was tied in packages and given each patient, and the girl scouts had two girls on each side of the square give the packages to all who would accept them. Hygeia, Red Cross and the Tuberculosis Society, all sent posters which were hung on the walls of the waiting room. Hygeia also sent balloons which were given the older children after their examination, eight years being the age limit; the state sent the electrical poster shown at the State Fair. It created much interest as well as being a source of amusement for the children while waiting.

A first prize of \$2.00 and a second prize of \$1.00 were offered for the grade school child making the best poster announcing the health conference. For three weeks before the Festival we had newspaper articles in the three county papers explaining the conference and the work of the Division of Child Hygiene and urging the parents to be present at the time their child was examined. The superintendent of the schools in each town and the county superintendent of schools granted permission for any child to remain away from school to attend the conference and not be marked absent. The expenses were \$3.00, including ink, paper cups and towels and paper for examining tables so that each child was put on a fresh piece when examined. The Pertussin Cough Syrup Company sent four gross of tongue blades. Each clergyman in the county announced the conference and made a short health talk the Sunday before the conference. Following is a tabulation of the examinations:

Total examined	224
Having 1 or more defects.....	179
Breast feed at least 6 months.....	157
Vaccinated for smallpox	27
Vaccinated for diphtheria.....	32
Vaccinated for typhoid.....	7
Underweight (More than 10 per cent.).....	45
Enlarged or diseased tonsils.....	112
Adenoids	20
Decayed teeth	64
Heart complications	12
Lung complications	2
Hernia	8
Needing circumcision	16
Orthopedic defects	7
Enlarged thyroids	6
Miscellaneous defects	18

BOOK REVIEWS

PATHOGÉNIE DES CALCULS BILIAIRES ET INDICATIONS OPÉRATOIRES. Par Thorkild Røvsing, Professeur de clinique chirurgicale à l'Université de Copenhague, Membre de la Société nationale de Chirurgie de Paris, etc. Traduction du Dr. Saint-Cère. 1 vol. 125 pages avec 3 planches dont 2 en couleurs. Masson & Cie, Editeurs. 120 Boulevard Saint-Germain, Paris. 1925. 20 fr.

Some thirty years ago Naunyn announced that in his opinion biliary calculi are formed in the gall bladder due to stasis and inflammation, or stated axiomatically, "Without inflammation no biliary calculi." For many years this hypothesis has dominated all others in the gall stone field. Thorkild Røvsing, of Copenhagen, has combatted this doctrine for over twenty years and in 1922 published a work in Danish denouncing it and promulgating in its place an hypothesis of his own, namely, that biliary calculi are formed in the liver and not in the gall bladder. Unfortunately the book attracted very little attention in this big world, or as he expressed it in his preface to the French edition: "The voice of a small nation is heard but feebly in the concert of great nations." He therefore, has had it translated into French by Saint Cere with the hope that it will not only be noticed but also receive the discussion that its merits deserve.

Before writing the book Røvsing had operated upon 530 patients with biliary disease and had studied from every angle the form and structure of the calculi found in the operations and besides that has studied the biliary conditions found in autopsies made at the "Regshospital" from 1910 to 1920. From all of this work he has reached the conclusion that biliary calculi are formed primarily in the liver and not in the gall bladder, and in this volume sets forth the reasons for arriving at this conclusion. He finds that small pigmented particles "bilihumine calcique noir" form in the liver cells, are later thrown out of the cells into the bile ducts and eventually carried by the flow of bile into the gall bladder where, uniting with others of a similar nature they form small, black mulberry like calculi. These calculi sometimes set up an irritation of the gall bladder mucosa which causes a secretion of cholesterolin and the cholesterolin forms gall stones by collecting around the black calculi. Break any cholesterolin calculus apart and in its center will be found the black pigment of the liver formed stone.

While the volume is controversial in tone it is, nevertheless, clearly and interestingly written and illustrated with three of the most beautiful and artistic full page lithographs of gall stones the reviewer has ever seen. They alone are well worth the price of the book. Every internist and abdominal surgeon should study this volume and every practitioner should read it for now that we know the source, who is free of gall stones? A. R.

DIAGNOSIS ET TRAITEMENT DES MALADIES DE LA VESICULE BILIAIRE, par l'excrétion vésiculaire provoquée. Par M. Chiray, professeur agrégé à la Faculté de Médecine de Paris, médecin des hôpitaux et M. Milochévitch, docteur en médecine de l'Université de Paris. 1 volume de 156 pages avec 13 figures. Masson et Cie, Editeurs. 120 Boulevard Saint-Germain, Paris. 1924. 12 fr.

That science is universal and knows no country is demonstrated by this volume. Two Frenchmen take up and highly praise the work of two Americans and one German on the treatment of biliary diseases and they display the treasured gift of true scientists, caution in assertion and courage of conviction. The late S. J. Meltzer discovered that the application of a 25 per cent. solution of magnesium sulphate to the mucosa of the duodenum-causes in a few minutes a dilatation of the common duct and a contraction of the gall bladder with a flow of concentrated bile into the intestine. He called this phenomenon "Contrary Incurvation," published the observation in April, 1917, and suggested that it might be of value in the treatment of gall bladder diseases. Vincent Lyon seized upon the idea and for fifteen months carried out a series of experiments with it in France, on the men of the United States Navy Base Hospital No. 5, and for six months in the Jefferson Hospital, Philadelphia. He found it of great value in the diagnosis and treatment of gall bladder diseases, developed an elaborate technique and published the results in September, 1919. He termed it "Non-Surgical Drainage of the Gall Tract." Immediately a lot of literature pro and con grew up about it, mostly con, however. Here are two Frenchmen who have carried out a number of carefully conducted observations with the method, tabulated the results and written a book of 156 pages in praise of it. They also record studies made with the method of Wm. Stepp, of Germany, who in 1918, during the war, published an article upon the results obtained in treating biliary diseases with the application of a 3 per cent. solution of Witte's peptone to the duodenal mucosa, following an observation of Franz Rost published in 1913.

Both the Meltzer-Lyon and Stepp methods were studied and compared and while many observers assert that the Witte peptone method of Stepp is too irritating for practical use they declare that they get equally good results with either method.

The book is one of the utility series published by Masson et Cie. It is concisely and clearly written and no gastro-enterologist can afford to be without it. A. R.

VAGOTONIES, SYMPATHICOTONIES, NEUROTONIES. Les états de déséquilibre du système nerveux organovégétatif. Par le Dr. A. C. Guillaume. 1 volume de 282 pages avec 14 figures. Masson et Cie, Editeurs, 120 Boulevard Saint Germain, Paris-VI, France. Prix 14 fr.

This is an essay on the sympathetic and parasympathetic nervous systems. The author has attempted to systematize our knowledge of this subject somewhat

as Gaskell has done for us in English. The author makes clear the intimate and complex relation between the endocrine glands and the nervous system, and the state of allergy and shock with their sympathetic background. Among other things he shows the advantage of knowing the conditions before one uses surgical attempts or even the administration of serums, or for that matter, of salvarsan. For the most part, these shocks are due to a lowering of the sympathetic tone of the body and are relieved by the administration of adrenalin, sometimes of the atropin bodies and sometimes by the treatment of the thyroid and ovarian insufficiencies. Unfortunately the book is not filled with illustrative case histories, and we would therefore say, that it is interesting as the discussion of a theory and stimulates one to study his own case histories to see if they are explained by this imbalance of the nervous system with its lowering of the parasympathetic tone, or the raising of the vagus tone. In other words, students of pathology and other similar subjects, will do well to read and study Guillaume's book, before arriving at final conclusions. What is needed now, is a series of dependable functional tests, in order that we may know the tone of the parasympathetic, the sympathetic and the vagus, as well as the condition of the thyroid, ovarian and the adrenal glands. The profession is working out very energetically such tests for the condition of the liver, the pancreas and the kidney. When such function tests shall have been elaborated and standardized, then we can utilize the reasoning of Dr. Guillaume in making a prognosis as well as a diagnosis of these very puzzling conditions. G. H. H.

DIET IN HEALTH AND DISEASE. By Julius Friedenwald, M.D., Professor of Gastro-Enterology in the University of Maryland School of Medicine, Baltimore; and John Ruhrah, M.D., Professor of Diseases of Children in the University of Maryland, Baltimore. Sixth edition, thoroughly revised. Philadelphia and London. W. B. Saunders Company. 1925. Price \$8.00.

During the twenty years that this book has been before the medical profession it has earned for itself a most enviable reputation which the present edition can only further enhance. The authors have not departed from their original plan of making the book above all things practical. They have avoided stressing fads but have not hesitated to incorporate those advances which stand on a firm clinical basis. The chapter on infant feeding has been in great part rewritten. It is unusual and at the same time gratifying to see so many pages of the book devoted to this subject. The newer methods of the feeding of infants both in health and disease are given in detail, including the newer food mixtures, and the dietary management of various disorders as well as an extended paragraph on the management of Celiac disease with illustrative diet lists. Much attention is likewise given to the dietary needs of the child just past the years of infancy.

The management of peptic ulcer is given its usual detailed exposition and it is worthy of note in these days when the ambulatory method of handling ulcer cases is becoming all too prevalent, that the authors write that "when an ulcer patient is treated medically he should be thoroughly treated and ambulatory treatment should, if possible, not be instituted."

The Sippy method is hailed as a distinct advance and offers in their experience an appreciably higher percentage of cures, but it should be carried out, at least for the first weeks, with the patient in bed.

In view of all the various diets that have been proposed for high blood pressure one is pleased by the frankness of the authors in stating that "very little is known about the relation of diet to hypertension except where there are other definite changes in connection with it." The subterfuge of placing the patient on some quite useless plan of low protein or salt poor diet should not blind us to the present very unsatisfactory state of the whole subject. The reviewer is surprised to see the term "gastralgia" retained as if it represented some entity. It seems to be high time that the word and all the misconceptions that have followed in its wake be thrown overboard. The same might also be said concerning all the older diabetic diet lists of the "allowable and non-allowable foods" variety. No physician should today be satisfied with anything other than an accurate prescription of weighed foods with due consideration of their carbohydrate, protein and fat content and the caloric needs of the patient based upon urinalysis and blood sugar content. It is perhaps too much to expect every patient to adhere to such a plan, but it remains a distinct question as to how much good is done or effort wasted in getting him to adhere to any other.

At the end of the volume the cook book with recipes contains many hints of practical value for obtaining variety in food preparation as well as stressing the fact that the method of food preparation is in many instances fully as important as the kind of food prepared. J. E. C.

OPERATING ROOM PROCEDURE. For Nurses and Internes. By Henry C. Falk, M.D., Assistant Attending Surgeon to the French Hospital; Assistant Attending Gynecologist to the Harlem Hospital. With a foreword by Eugene H. Pool, M.D., New York. G. P. Putnam's Sons. New York and London. 1925. Price \$2.50.

This book, written for nurses and internes, is primarily a text book for nurses, being an outgrowth of a series of lectures to nurses of an operating room. Part one, giving in outline the preparation of the patient for operation, the preparation of the operating room and its supplies, has been thoroughly and completely covered. Part two is a very brief synopsis and description, stage by stage, of the more common operations encountered in a service of general surgery. The subjects although poorly illustrated and too condensed are so presented that the nurse can grasp the important details of the operations which if followed would insure safe and intelligent cooperation in the operating room. As a whole the book is well arranged and written in a very comprehensive manner. J. E. S.

EMPHYEMA THORACIS, Some Fundamental Considerations in the Treatment of. By Evarts A. Graham, A.B., M.D., Member of Empyema Commission, U. S. Army; Professor of Surgery, Washington University School of Medicine; Surgeon-in-chief, Barnes Hospital and St. Louis Children's Hospital. Illustrated. St. Louis. The C. V. Mosby Company. 1925. Price \$2.50.

This monograph, which was prepared shortly after the World War, was awarded the Samuel D. Gross Prize of the Philadelphia Academy of Surgery in 1920, and represents the final opinion based on the author's experimental and clinical work during the terrible epidemics which followed the influenza in the United States camps. The fright-

ful loss of life which followed the open operations of the empyema cases, caused the Surgeon General to have a thorough study made of the entire empyema problem.

The mortality which ranged from 65 per cent. down to 56 per cent. in the early cases was reduced to 9.5 per cent. when the conclusions of the author and his co-workers were carried out.

One of the most important changes in the line of the treatment was the prevention of open pneumothorax in the acute stage of the disease. The experiments leading up to these valuable new methods of treatment are clearly outlined in the monograph.

In the last part of the book there is a chapter bringing the ideas up to date with description of experiments done by others in the pneumothorax problems.

The book is small, consisting of 110 pages, but is of great interest to those physicians and surgeons who come in contact with chest diseases.

J. J. S.

ADDRESSES TO MENTAL NURSES. A Series of Fifteen Lectures Delivered to the Nursing Staff of the Retreat, York, by Various Authorities. Edited and arranged by Bedford Pierce, M.D., Lond., F. R. C. P. Lond. London: Bailliere, Tindall and Cox. 8, Henrietta Street, Covent Garden. 1924.

York Retreat has always stood for the highest type of mental nursing since its inauguration by William Tuke in 1795. It has attracted to its medical staff some of the foremost psychiatrists of England and its medical visitors and lecturers include the leaders in psychiatry in England and Scotland.

This small book contains much of the intimate experience of its various authors and would in a measure serve as a text book for nurses and others studying the care of the insane.

The lecturers have all met the problems they are talking about and recognize their difficulty. There are no platitudes. They tell the nurse what to do and how to do it.

An extremely helpful lecture on occupation for the insane by Dr. Henry Devine gives two sentences which should be hung on the wall of every ward, namely:

"All able-bodied patients not employed are to be considered as failures from a nursing point of view."

"No chronic case is to be regarded as hopeless, and some degree of improvement is always possible."

The book is full of inspiration for those who work in a very trying and often discouraging activity. M. A. B.

PARASITOLOGY. For Medical Students. By Alex Mills Kennedy, M.D., Professor of Medicine, University of Wales and Director of the Medical Unit, Welsh National School of Medicine. Oxford University Press. American Branch, 35 W. 32nd St., New York City. Price \$3.00.

This is not an extensive treatise for a parasitologist but a small, well illustrated book for the general practitioner as well as the medical student. Although much of the material presented is found in most works on clinical pathology, the compact arrangement, the numerous microphotographs and the author's interesting style will appeal to the reader. Aside from the usual descriptions, Kennedy considers each parasitogenic disease from the standpoint of prophylaxis and public health also, thus adding to the practical value of the volume. N. T.

PERSONAL AND COMMUNITY HYGIENE. By Clair E. Turner, Associate Professor of Biology and Public Health in the Massachusetts Institute of Technology; Associate Professor of Hygiene in the Tufts College Medical and Dental Schools. Illustrated. St. Louis. The C. V. Mosby Company. 1925. Price \$2.50.

The first impression of this book is that the author has tried to cover such a large field that the amount of space allotted to any one subject is so small as to produce an outline only, but before criticising the book it is well to consider the author's purpose and note that he clearly states that "this book has been prepared for the student at the university, college or professional school. It deals with the health of the individual and with the health of the community." In other words, this book is written, not so much with the idea of making a professional sanitarian or health worker, but with the idea of giving the college student a broad vision of the whole subject of personal and community health.

It is a book which would prove a valuable asset to any college course. Only a small percentage of our college graduates have any idea regarding the elements of their own personal health and nothing of the program for community health. Public health programs will never succeed as they should unless they have the backing of the best trained leaders of the community. A general course of the things outlined in this text should, therefore, be available for, if not required of, every college student.

The book is divided into seventeen chapters, the first six dealing with personal hygiene.

The author starts in by a personal appeal to the student to consider the question of health values, showing the importance of complete physical fitness as a basis for his life's work if he is to accomplish his best. The hygiene of nutrition is then taken up and divided into diet, digestion and assimilation. Then comes the hygiene of action, showing the importance of exercise and the ordinary body activities, dealing with the subject of posture and deformities.

A chapter is devoted to the hygiene of the central nervous system and although very brief gives the student an insight and a chance to read further if he desires. Hygiene of reproduction covers the subject of heredity, pre-natal care, infant care and sex hygiene.

Development, function and oral prophylaxis are subdivisions of the chapter devoted to hygiene of the mouth.

The part of the book dealing with community health starts in with the new science of disease prevention and gives an historical sketch of the earlier periods of disease and the development of preventive medicine, sanitation and hygiene. Brief descriptions are given of a few well known epidemics. Chapters then follow on subjects of communicable disease, immunity and the three great plagues, in which the author gives the student more information on the subject of tuberculosis, syphilis and the common cold.

The appendix on the subject of disinfection and disinfectants is devoted to definitions and discussions of the various types and means of disinfection.

The book is profusely illustrated and contains much material found in a number of other books and pamphlets. Due credit is given for the use of all material and the bibliography on all of the subjects discussed in the book is provided.

By making proper use of this bibliography, the book can be used in professional schools as well as

in the general college course. The book should also prove of value to the layman who is interested in learning something about the relations between personal and community health and the importance of the public health program. The author is to be commended for the non-technical and interesting style in which he has handled the subject. A. H. J.

OPOTHÉRAPIE ENDOCRINIENNE. Par Guy Laroche. Médecin des Hopitaux de Paris. Les bases physiologiques les syndromes, la posologie de l'opothérapie par les glandes a sécrétions internes. Mason et Cie Editeurs. 120 Boulevard Saint Germain, Paris-VIe, France. 1925.

This is a thoroughgoing study of endocrine therapeutics. The author starts with a quotation from Cushing, from his address before the Association for the Study of Internal Secretions in Boston 1921, where he said, "Endocrinology is a stormy sea, where it is much more easy to lose one's way since the most of us have little knowledge of navigation and have only a vague idea of our destinations." He discusses also the sources of the various glandular products as which animal is the best for each, how they should be prepared, what the effects are, both toxic and therapeutic, and in what disorder they should be used. The author believes that the thymus, (or thymic extract) is of little use in therapy, and your reviewer agrees with him. The author gives greater credit to the function of the cortex adrenal than do some writers. He attributes most of its activity to its content of cholesterol. He finds that in pathological conditions the amount of cholesterol in the cortex of the adrenal varies greatly. He says that it is of great value in toxemia and also in maintaining the equilibrium of the body in regard to hydration and the development of the acids.

Each gland has been studied thoroughly in this way, consequently the book is one of the most valuable we have seen and is a summary of our present day knowledge of endocrinology and the therapeutics of the endocrine glands. G. H. H.

INDUSTRIAL POISONS IN THE UNITED STATES. By Alice Hamilton, A.M., M.D., Assistant Professor of Industrial Medicine, Harvard Medical School. Cloth. Price, \$5. Pp. 590. New York: The Macmillan Company, 1925.

This five hundred and ninety page book on the various industrial poisons in the United States, is written by a physician who has had many years experience as a special investigator of Poisonous Industries as well as a teacher of Industrial Medicine. The book is a most comprehensive treatise on industrial toxicology. The author not only considers the toxicology of the various materials used in dangerous trades but enters into the industry from the mining or production of the raw material to the finished product. The subject matter is presented in a most interesting manner so that the Layman as well as the Scientist can understand. In a clear cut manner the author enters into the history, pathology, chemistry and toxicology of the various materials used in dangerous trades. In addition to the subject matter there is a most comprehensive indexed bibliography of American and European references. The book is highly recommended as a reference work and textbook not only for the industrial surgeon, internist, biologist, chemist and student but also to the industrialist of dangerous trades who should thoroughly acquaint himself and his employees with the hazards attached to his business. A. C. C.

THE SURGERY OF PULMONARY TUBERCULOSIS. By John Alexander, B.S., M.A., M.D.,- Assistant Professor of Surgery in the Medical School, University of Michigan; Formerly Assistant to the Professor of Clinical Surgery, University of Pennsylvania. With introductions by Hugh Cabot, M.D., C.M.G., LL.D., F.A.C.S., Professor of Surgery and Dean of the Medical School, University of Michigan, and Edward R. Baldwin, M.A., M.D., Lea & Febiger. Philadelphia and New York. 1925. Price \$4.50.

This latest book on pulmonary surgery and its relationship to the cure of tuberculosis represents the last word in our present conception of this important subject. Dr. Alexander has truly combed the literature of the world to obtain material for this book, there being five hundred references.

There are many excellent diagrams and photographs illustrating the value of various surgical procedures that are useful. The chapters on pneumothorax, thoracoscopy, and thoracoplasty are complete. The text reads very easily and one is able to receive the message of the author with very little difficulty.

A careful study of this book gives one the impression that the author thinks many cases of tuberculosis are allowed to die without an attempt at surgical relief and that he is pleading for the many hopeless consumptives found in sanatoriums. It is the opinion of the reviewer that the number of cases suitable for surgical treatment are relatively few, but that greater benefits will be derived in the next few years as a result of the preliminary work along this line.

To those interested in pulmonary tuberculosis medically there is much to be learned from this work and to general surgeons it will be a revelation.

J. J. S.

PREVENTIVE MEDICINE. By Mark F. Boyd, M.D., C.P.H., Member of Regular Field Staff, International Health Board of Rockefeller Foundation; formerly Professor of Bacteriology and Preventive Medicine in the Medical Department of the University of Texas. Second edition, thoroughly revised. Philadelphia and London. W. B. Saunders Company. 1925. Price \$4.00.

This little book of 430 pages deals briefly with the salient features of modern preventive medicine. It is divided into eight sections treating the disease due to invading microorganisms, epidemiology, deficiency disease, occupational diseases, the special aspects of hygiene and sanitation, demography and public health. Each section contains short chapters covering the field in detail.

The author justly attaches more importance to concomitant than to technical disinfection in the prevention of the spreading of diseases. Whether or not his opinion is justified that "thanks to national prohibition alcoholics will soon be a matter of historical interest in the United States," is more than doubtful. Abolition of prostitution is not as simple as the author seems to think. The last word about this important question has not yet been spoken. The condemnation of midwives is too sweeping. There are some very competent women among them. Under the head of occupational diseases poisoning by phosphorus has been omitted. Altogether this volume, though necessarily condensed, contains a wealth of information and should be in the hands of every student and general practitioner.

E. S.

A TEXT-BOOK OF PRACTICAL THERAPEUTICS. By Holart Amory Hare, B.Sc., M.D., LL.D. Professor of Therapeutics, Materia Medica, and Diagnosis in the Jefferson Medical College of Philadelphia, etc. 19th ed., enlarged, thoroughly revised and largely rewritten. Illustrated with 144 engravings and 8 plates. Philadelphia and New York: Lea & Febiger. 1925. Price \$7.00.

The present edition of Hare's Therapeutics is the nineteenth which has appeared in the past few years. This alone shows that the book fulfills a purpose and is found useful by the rank and file of the medical profession. This last edition has been thoroughly revised and brought up to date, many new articles, such as the ones on insulin and the use of iodine in exophthalmic goitre, having been added and certain others rewritten.

The very wide clinical experience of the author is evident in every paragraph and careful and accurate clinical observation, whether backed up by experimental evidence or not, is given its proper place in therapy. Many of the articles are necessarily brief and sketchy, as is the case in any one-volume book on therapeutics, but on the whole this new edition will be found fully up to the high standard which has been set by its predecessors.

L. H. H.

THE NORMAL DIET. A Simple Statement of the Fundamental Principles of Diet for the Mutual Use of Physicians and Patients. By W. D. Sansum, M.S., M.D., Director of the Potter Metabolic Clinic, Department of Metabolism, Santa Barbara Cottage Hospital, Santa Barbara, Calif. Illustrated. St. Louis. The C. V. Mosby Company. 1925. Price \$1.50.

This monograph, a quarter of an inch thick, is a "simple statement of the fundamental principles of diet for the mutual use of physicians and patients." It takes up the requirements of the body, giving a brief chapter to the needs in calories, protein, bulk, minerals, water and vitamins, dealing briefly with acidosis. It is well worth reading and valuable to patients.

W. A. M.

A TEXT-BOOK OF GENERAL BACTERIOLOGY. By Edwin O. Jordan, Ph.D., Professor of Bacteriology in the University of Chicago and in Rush Medical College. Eighth edition, thoroughly revised. Philadelphia and London. W. B. Saunders Company. 1924. Price \$5.00.

In his latest edition, the author has incorporated concise paragraphs on recent work with scarlet fever, botulism, bacteriophage and tularemia. The book remains a practical, conservative text.

A. S. W.

METHODS IN SURGERY. Used in the Surgical Divisions of Barnes Hospital, St. Louis Children's Hospital and Washington University Dispensary. By Glover H. Copher, M.D., Instructor in Surgery, Washington University School of Medicine. St. Louis. The C. V. Mosby Company. 1925. Price \$3.00.

This book was primarily prepared by Dr. Copher for the guidance of those working in Barnes Hospital, The St. Louis Children's Hospital and Washington University Dispensary. It contains a very concise and systematic presentation of the various routine procedures that should be used in a carefully organized hospital; also a complete list of diets.

E. V. M.

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies
Issued Monthly under direction of the Publication Committee

VOLUME XXII

DECEMBER, 1925

NUMBER 12

E. J. GOODWIN, M.D., EDITOR
901 Missouri Building, St. Louis, Mo.

PUBLICATION { W. H. BREUER, M.D., Chairman
COMMITTEE { C. B. FRANCISCO, M.D.
M. A. BLISS, M.D.

ORIGINAL ARTICLES

THE DIAGNOSIS AND TREATMENT OF STERILITY*

G. D. ROYSTON, M.D.

AND

O. S. KREBS, M.D.

ST. LOUIS

If the human race does not wish to become extinct the problem of an increasing rate in sterility must be remedied. The custom of smaller families makes it vitally important that all couples so inclined be enabled to bear children. Childless marriages frequently cause divorce.

In a broad sense, inability to reproduce one's kind is sterility. In the scope of this paper we shall limit the term to inability to conceive. Both man and woman are essential to conception and the responsibility for failure to have children may be with one or both parties. Various authors estimate that from 20 per cent. to 50 per cent. of the males are responsible for sterility; in our opinion, in about one-third of all sterile marriages the male is at fault. Although in many cases no moral stigma should be attached to the condition and despite his objections to the contrary, it is our duty to place the blame where it belongs and if the male is found to be at fault, his care lies in the hands of the urologist or internist as the case may be.

Nonspecific infections involving the genitalia can cause sterility in either male or female. In the former, such conditions as congenital absence of testicles, undescended testicles or hydrocele, may lead to absence of spermatozoa. Obstruction and stricture in the vas deferens, epididymis or urethra, hypospadias or epispadias and other malformations of the penis may prevent the proper deposit of semen in the female genital tract. Constitutional diseases or

wasting diseases, such as diabetes, anemia, nephritis, cardiac lesions and malignancy may prevent the formation of healthy spermatozoa and lead even to impotence. The same conditions may result from systemic infections and various toxic conditions, as chronic alcoholism, drug addiction, etc., while the acute exanthemata of childhood, as mumps, may result in atrophy of the testicle. Such miscellaneous conditions as obesity, occupational diseases, sexual, hygienic, dietary and recreational habits deserve consideration. Various mental and nervous conditions are of the utmost importance and frequently lead to functional disturbances of successful intercourse, such as premature ejaculation and impotence. Although our knowledge of endocrine disturbances is limited, we know that hyperthyroidism, hypogonadism and hypopituitarism are associated with a high degree of sterility. In the male, venereal diseases and their sequelae probably account for the largest part of the instances of sterility.

In the female, many of the factors that operate in the male may be mentioned, such as constitutional and wasting diseases, the exanthemata of childhood, systemic infections, toxic conditions and nervous and mental diseases. Congenital defects, as the absence of one or more of the genital organs, imperforate hymen, atresia of the vagina, pin-point cervical os, infantile uterus and appendages are infrequent in appearance. Uterine, ovarian and parovarian tumors are frequently encountered and if not a cause of sterility, rank high in the cause of early fetal death. Pelvic inflammatory disease, whether following tuberculosis, appendicitis, venereal infection, abortion, instrumentation or childbirth, is of the greatest importance. The results of childbirth, whether a lacerated perineum causing improper reception or retention of semen, a displacement of the uterus, cervix uteri or appendages with resulting trophic and circulatory disturbance, or a laceration of the cervix with erosion, eversion and endocervicitis, must all be seriously considered. Occasionally lactation atrophy or hyperinvolution of the uterus renders the woman sterile. Endocrine imbalance may be the cause of sterility and disturbance of ovarian

*Read by Dr. G. D. Royston before the 68th Annual meeting of the Missouri State Medical Association, Kansas City, May 5, 6, 7, 1925.

function may lead to menstrual irregularities and absence of development, ripening and extrusion of the ovum. Hypothyroidism seems to be important in female sterility. In still other individuals with normal pelvic organs sterility exists. Here we may find dyspareunia and vaginismus, at times from sexual incompatibility. In these women with normal pelvic organs, the uterine, cervical and vaginal secretions are at times hostile to the spermatozoa. Still in some individuals where no cause for sterility can be found it is nevertheless present.

In many instances the failure of reproduction is in the fact of decreased fertility rather than of actual sterility on the part of the two individuals concerned. McCollum, Osborne and Mendel and others, first observed that diets deficient in certain important elements have resulted in lowered fertility. These elements are the mineral salts of which calcium is the most important; a sufficient amount and variety of the proteins and the substances which are generally known as vitamins and are classified as the fat-soluble A vitamin, the water-soluble B vitamin and the antiscorbutic vitamin. Reynolds and MacComber feel that their experimental contributions in the causation of sterility in rats have shown that dietary deficiencies which are too slight to cause ill health or even marked loss of condition, nevertheless result in a high percentage of infertile matings and that where percentage of deficiency in both protein and calcium produces visible ill health, great infertility results.

Macomber in a later paper felt that the kind of dietary deficiency is not important but rather the degree, since the greater the deficiency the larger the proportion of sterility. The way in which the diet seems to affect sterility is through the general effect on the health of the individual. Later Evans and Bishop suggested the existence of a hitherto unknown dietary factor essential for reproduction, which they have designated vitamin X, which they found in lettuce leaves, fresh or dried, cheek muscle of cow, the cereals, egg yolk and beef liver. Barnett Sure proposed that the term E be used for this new dietary factor.

Having considered thus briefly the definition of sterility and the factors producing it and influencing fertility, we may now discuss their practical application.

When the patient presents herself a careful history is taken including history of all acute and chronic infections, detailed menstrual history with a consideration of general habits in regard to food, drink, recreation, personal hygiene, etc. The general physical examination is next in order, special attention being given to determine any focus of infection that may exist, not only in the genitalia, but also in

the nose, throat, teeth and chest, together with notation of general development and nourishment, as well as evidence of endocrine imbalance (secondary sexual characteristics, etc.). The gynecological examination will disclose three general groups as outlined by Cary: (1) Cases with a gross pathology which entirely precludes pregnancy or which renders pregnancy a dangerous complication; also conditions which, while likely to cause sterility, have themselves an importance superceding sterility. (2) This group includes cases with minor pelvic lesions which have an importance due chiefly to the possible relation they bear to their interference with pregnancy. Here we find flexions, uncomplicated versions, pin-hole os, mucus plug obstructing cervix, tilting of cervix out of seminal pool, etc. (3) In this group may be placed those patients in whom no abnormality is found. In the absence of pathologic conditions that are probably responsible, we must investigate still further to know whether the male or female or both are at fault and in what part of the anatomy of either sex the impediment lies.

For practical purposes we have found the Huhner test valuable because of its simplicity and the definiteness of its results. With it we test the vitality of the husband's semen in the genitalia of his own wife, which itself is of the greatest diagnostic value. In a condom specimen, it is imperative to find many active spermatozoa, but in a specimen obtained by expression of the prostate and seminal vesicles, their absence does not indicate anything pathologic, since normal prostatic and vesical secretion thus obtained may contain no spermatozoa shortly after coitus. Many pus cells in a condom specimen is abnormal. The woman comes to the office as soon after intercourse as possible, is placed in the usual gynecological position, a bivalve speculum is inserted, the cervix is brought into view, and some of the cervical contents is sucked into the pipette, and immediately expelled on a slide and examined under a microscope. Often we see at once numerous lively spermatozoa. What more do we care about? The living spermatozoa tell us at once that for that particular penis the cervix is in the right position to catch the semen, for when we have found live spermatozoa in the cervix we therefore know that none of these conditions (stricture, epispadias, size of vagina, etc.) has any influence in this case of sterility. Likewise we need not worry about the possibility of the cervical or vaginal secretions being hostile to the vitality of the spermatozoa, for we know that they cannot be the cause of sterility in this particular case. Suppose, however, that only dead spermatozoa are found in the cervix. We

then examine a condom specimen, and if it contain only dead spermatozoa we know that the fault is with the husband; if live spermatozoa, however, are found in the condom we know at once that something about the genital secretions of the female has killed the spermatozoa. In this condition, if we find the vaginal or cervical secretions markedly acid, we order a soda bicarbonate douche before coitus, and make another test. If this second test now shows live spermatozoa in the cervix, we have not only made our diagnosis but have been informed how to preserve their vitality and cure the sterility. In the cases of sterility in which live spermatozoa are found in the fundus uteri our diagnosis is now down to one of three conditions: (1) A small, undeveloped, infantile uterus which will not nourish a developing impregnated ovum; (2) obstruction in the tube, and (3) conditions of the ovaries, endocrins or otherwise in character.

It is well to remember, as Giles states, that 11 per cent. to 15 per cent. of all women under 24 years of age have closed tubes. One should hesitate to subject such women to exploratory laparotomy, so that a method whereby patency of the tubes could be demonstrated without surgical means is eminently desirable. Obstruction of the tubes can now be positively diagnosed by the Rubin test. The technic is very simple, entirely harmless, practically painless and can be done in the office or dispensary, the patient going home shortly afterward. The test which combines injecting the uterus with oxygen with subsequent fluoroscopy and roentgenography should be made a routine just like the test for spermatozoa. We use carbon dioxide because of the greater rapidity of absorption and consequent less discomfort than from oxygen, which takes two or three days to absorb. There are no pelvic symptoms after the gas inflation. It has been clearly demonstrated from some thousands of gas injections for transuterine insufflation, that oxygen, as used in this method, does not cause embolism. Since by actual experiments on the dog, Rubin found that the animal tolerated 350 cubic centimeters of oxygen introduced directly into the leg vein without any symptoms attending the injection or following it, he felt that the accident of embolism from oxygen could be disregarded.

In 1921 Rubin introduced for transuterine insufflation a manometer and flow volumeter which is the apparatus we now use. It consists of a bottle filled with sterile water or $\frac{1}{2}$ per cent. salicylic acid solution to a point just above the outlet on the inverted syphon tube which regulates the pulsation or quantity of gas used (each bubble of gas representing approximately 37 c.c.), the latter being directly

connected with the carbon dioxide tank. At the top of the bottle there are two other drawn glass outlets, one connecting with the mercury manometer and the other with the cannula to be introduced in the cervical canal. The carbon dioxide tank has a pressure reducing attachment which should be set at 90. All joints and rubber connections must be tested to see if they are air tight. The cervix is exposed through a speculum, the vagina is cleansed and the cervix is painted with tincture of iodine. If uncertain as to the direction of the uterine cavity, it may be determined by passing the uterine sound; the anterior lip of the cervix is grasped with a tenaculum forceps passed along the outer side of the speculum so as not to obstruct the view. The gas should be regulated to run very slowly, about four to six pulsations per minute, since a more rapid rate of injection requires a greater pressure to permit the gas to pass through the fallopian tubes. This rate is equivalent to permitting a pressure of 100 mm. to be attained in twenty seconds. A rubber urethral tip, placed ordinarily from one and one half to two inches away from the cannula tip, is then fitted into the external os without any traction on the cervix, which is merely steadied with the tenaculum. Within a few seconds after the gas enters the uterine cavity the pressure in the mercury manometer will rise, reaching its maximum point, usually 100 to 120 mm. in patent cases, within thirty to forty-five seconds, then drops slowly or again rather sharply from ten to forty or more points, maintaining the last level for the rest of the time. There may be a slight escape of carbon dioxide from the external os in the case of patent tubes, but as a rule there is none until the cannula is removed, when slight regurgitation is present. In the nonpatent case the pressure usually rises steadily for three quarters of a minute to a minute or longer, and then drops sharply as the gas regurgitates into the vagina.

In the positive patent cases the pressure need not exceed 40 mm. The average pressure is from 60 to 80; usually the pressure rises to 100 mm. or more before the oxygen will pass through the uterine end of the tubes. A pressure of 200 regularly after three attempts is tolerably certain to be due to closed tubes. Fluoroscopy, however, may be employed to check up the doubtful cases of partially stenosed tubes, as oxygen will sometimes succeed in escaping into the abdomen though the pressure required to force it in is comparatively high. In such cases where the symptoms are annoying it is well for the patient to lie down for a few hours on reaching home, with the foot of the bed elevated and then moderate Trendelenburg posture. The method is indi-

cated in any case where the patency of the fallopian tubes is to be determined and also to keep the tubes open following salpingostomy. The method is not to be used in the presence of any acute or subacute pelvic infection nor in the presence of any purulent discharge or in cases of suspected pregnancy.

Alvarez, in September, 1920, first reported the use of carbon dioxide instead of oxygen and found less symptoms developing and that the gas is more readily absorbed; in less than twenty-five minutes in most cases. Peterson was first to use carbon dioxide clinically in transuterine and transperitoneal insufflation. Aldridge, in a valuable paper concerning the interpretation of pressure findings during insufflation, brings out the following points in his experience: If gas injected slowly passed into the abdomen at an intrauterine pressure below 150 mm. the tubes were considered patent. If a pressure of 150 mm. or more was required before the gas passed into the abdomen the tubes were classified as partially occluded. Manometer readings of 200 mm. on repeated trials were considered to indicate occluded tubes.

After 200 cases had been insufflated and routinely examined with the fluoroscope it was decided that if a definite drop in intrauterine pressure was followed by shoulder pain, due to gas pressure beneath the diaphragm irritating the phrenic nerve, no further proof that the gas had passed into the abdomen was necessary. It is undoubtedly advisable to examine patients with the fluoroscope if a drop in pressure occurs which is not followed by shoulder pain. The congestion of menstruation may cause partial or complete obstruction of the tubes.

In Aldridge's series of sterility cases 66.5 per cent. had partial or complete tubal obstruction, in 44 per cent. of these pelvic examination being negative. Twenty-one cases were operated for retroversion in which the tubes appeared to be normal but in these 42.8 per cent. showed partial or complete obstruction when insufflated. During all laparotomies for sterility the patency of the tubes should be definitely determined by injecting the fimbriated extremity. Insufflation before operation would help to indicate which of these cases should be operated on though they are free from symptoms other than sterility. Three out of four of the cases in which the tubes were convoluted and of the infantile type showed complete occlusion when examined before the operation.

Any condition which produces congestion of the pelvic organs, such as menstruation, uterine displacements, pelvic inflammatory disease, myomata of the uterus, fibrosis uteri or ovarian

tumors may cause partial or complete obstruction of the tubes; hence patients shown by one attempt at insufflation to have obstructed tubes, may yet become pregnant.

Kennedy reports his use of 20 per cent. sodium bromide solution injected into the uterus, followed by radiographs, to determine the site of occlusion of the tubes and the nature of the pelvic lesion present. Where obstruction is at the fimbriated end of the tube, operation is indicated, but obstruction near the uterine end offers little hope for success. The procedure of Kennedy always followed the application of Rubin's technic to determine the patency of the tubes.

Heany advises the use of an ear syringe for insufflation, regurgitation of the gas from the external os being detected by immersing the cervix in water. A stethoscope is placed upon the abdomen just above the tubes and auscultation shows whether the air passes through both or only one tube.

Furniss employs carbon dioxide, admitted through a T connection with a manometer to a 30 c.c. luer syringe, which when filled injects the gas through a cannula with rubber tip into the uterus.

Dickinson uses a Shanes uterine tube fitted with a suitable bulb and uses air for injection. He feels that a pressure gauge is unnecessary since the fingers learn to recognize the proper resistance.

Rubin feels that the most favorable time for insufflation is from the fourth to seventh day following the cessation of the last regular menstruation. This time is of special value in cases of periodic amenorrhea of shorter or longer duration. We prefer seven days following cessation of menses.

Having considered the etiology and diagnosis of sterility it now remains to consider the treatment of the condition. We feel that the diagnosis is of primary importance and that correction of the indicated lesion in the male or female generative tract is usually quite clear. For any abnormal condition in the male that may cause the sterility, we turn to the urologist to treat the local abnormality, if any, and if of functional nature or merely a question of reduced fertility, we try to increase the latter by proper diet, hygiene and occupational and recreational habits and strive to put the man in the best possible physical condition.

In our domain lies chiefly the correction of the female abnormalities. If we find active spermatozoa in the cervical canal after Huhner's test and find the tubes patent, nothing more remains to be done so far as local measures are concerned. If pregnancy does not follow, the general condition of both being satisfactory and there being no evidence

of endocrine imbalance in the female, we must consider the case one of those where sterility results from unknown reasons; such cases are not unusual. In other cases, where we find the male normal and the only abnormality in the female lies in hostile vaginal or cervical secretions, the latter must be treated. In the majority of such instances endocervicitis or erosions of the cervix are the cause of the condition. The treatment or correction, one of the most difficult in gynecological work, may be varied in various hands but we find radial cauterization of the cervix for small lacerations and eversion and the Collin's method of cauterization of the cervical tract by graduated bougies heated to redness, the most satisfactory. For slight degrees of abnormality we employ a five per cent. solution of picric acid in alcohol or a five to ten per cent. solution of mercurochrome. For the unkindly mucus plug in the cervix and strongly acid vaginal secretion without local lesion, we find that douches of two per cent. sodium bicarbonate taken several hours before sexual relations, will overcome the condition in many instances.

In certain cases we find that the cervix does not dip into the seminal pool due to some version of the corpus and cervix, or flexion of the cervix. Again, if healthy spermatozoa are found in the cervix, we care not for the position of the corpus or cervix. Should the position prevent the spermatozoa from reaching the external os, we find at times that the knee-chest posture for five minutes immediately following coitus will correct the fault and give the desired results.

Then comes the difficult and probably largest portion of causes of sterility, those with occluded tubes. If we feel that the occlusion is due to pressure from tumors or malposition of the uterus or appendages, operation is indicated to overcome the condition. Should the occlusion be the result of inflammatory change we may rely on prolonged treatment by heat in the form of hot vaginal douches and pelvic baking followed from time to time by insufflation to test the result of the treatment. In many instances after prolonged treatment the tubes become patulous. In cases where all efforts at conservatism fail to produce the desired result, operation on the tubes may be attempted; that is, splitting open the lumen and sewing the mucosa to the peritoneum to hold open, but in most instances the tubes do not remain patent, as determined by subsequent insufflation. In all cases particular attention is given to a well balanced diet containing plenty of cream, butter, eggs, green vegetables, etc., open air exercises and ample rest; the use of tobacco by the woman is discouraged.

A phase of female sterility that must be

touched upon but which is not very satisfactory is that due to endocrine imbalance. Ovarian extracts are used extensively for the correction of menstrual disorders and at times seem instrumental in the production of healthy ova. Again, thyroid therapy in the overweight, sluggish patient with scanty and irregular menses may be indicated. Further glandular therapy may be as varied as the number of individuals presenting themselves, but no definite therapeutic regime seems satisfactory.

It has been shown by Hunner and Wharton that displacements of the uterus when adherent seldom permit of pregnancy. In such cases, when the tubes are found patent, we believe in operative correction of the malposition if it cannot be attained by conservative measures, such as the application of heat, tamponade, mercury bag treatment or bimanual manipulation; at times holding a movable retroversion forward with a pessary has been very successful. If the tubes are occluded and repeated treatment as indicated above does not render the tubes patulous, operation may be done for correction of the displacement and open the tubes. However, in such cases, the attitude of the operator in promising results must be most guarded because results are generally unsatisfactory; best results in such operations are seen in such cases where the tubes are merely convoluted or kinked before the operation. Treatment of displacement without tubal occlusion was considered above and if healthy spermatozoa are found in the cervix nothing further is indicated unless the displacement causes congestive abnormalities in the uterus, affecting the endometrium by disturbed circulation; or the appendages may also be displaced which makes rupture of the follicles and proper reception of the ovum by the fimbria unlikely. In such cases the uterus should be suspended as well as the ovary together with freeing from whatever adhesions may exist.

At times the sterility may be due to local conditions in the ovary and not only to the relation of the ovary to other pelvic structures. There may be a particularly tough tunica albuginea which prevents rupture of the Graafian follicles. This condition may be congenital or follow trophic or inflammatory changes in the ovary. Again there may be cystic degeneration of the follicles which increases the ovarian tension to such an extent that the follicles do not develop completely and rupture. Ovarian operations must be conservative and include simple rupture of follicles to decrease tension, enucleation of larger cystic follicles, to decortication in cases of unusually resistant tunica albuginea. In most operations for ovarian cysts the cyst can be dissected out leaving some

thinned ovarian tissue at the hilus which may functionate.

In the cervix we occasionally find obstruction of the canal either at the external or internal os and dilatation is at times indicated. Acute antelexion of the uterus may indicate operation but we must guard here against operation and expect results in those cases where antelexion is a stigma of infantilism. In operation for antelexion, Reynolds and Macomber advise lengthening the anterior vaginal wall and widening the cervical canal. These writers advise deep curettage of the cervix and very light curettage of the corpus in selected cases.

Tumors of the uterus and appendages as well as hyperplasias of the endometrium may require operation. Fibroid tumors of the uterus may cause pressure on the cavity of the uterus and cervical canal and if discrete and localized may be removed and yet preserve the functions.

In conclusion, several suggestions may be in order to improve our knowledge of sterility and overcome the condition. First, the cooperation of the husband is essential since in 30 per cent. or more of sterility cases husbands are at fault. Second, diagnosis is all important since operative procedures are generally contraindicated except where the husband is virile and the tubes are patent. Third, in our present state of knowledge certain matings remain sterile in the absence of any abnormalities, which sounds the warning that assurance of conception should never be made.

Wall Building.

DISCUSSION

DR. H. McCURE YOUNG, St. Louis: This is a very exhaustive review of the subject and has interested me a great deal. The phase I should like to discuss especially is the examination of the male. It is all nonsense, if a woman says she is sterile, for the surgeon or gynecologist to examine her and find some little thing, and then subject her to any operative procedure or prolonged treatment with the idea that that is the cause of the sterility, when he does not know whether or not the husband is fertile.

In every case the husband should be examined first, before the wife is subjected to any treatment whatsoever. The semen can be collected by prostatic massage, and often enough living spermatozoa will be found in abundance. In other cases it is necessary to take a condom specimen. I believe the Huhner method of testing the spermatozoa is an excellent one. Even though you find living spermatozoa present without the Huhner test being made, we do not know whether the semen is really properly deposited.

I think that is a question we should not have any delicacy about at all, if the couple are interested in the matter. We should inquire as to how the sexual function is performed. Couples may have been married for years, yet they are awkward, and proper connection does not result. It is not to be expected pregnancy will happen under those conditions.

If the semen is found to be sterile, the prognosis in general is poor. I have seen cases where I found no spermatozoa in the specimen procured; but after treatment of the prostate and dilating the seminal ducts, I have been able to find a few spermatozoa. I am not convinced that they might not have been found before on a sufficiently prolonged examination. Where men have gone the rounds and have been told by others that no spermatozoa could be found in the semen, I have found almost uniformly that even prolonged treatment by prostatic massage and dilating the ducts through the endoscope does not result successfully. I believe the blockage occurs not in the prostatic region, but further down along the vas, and probably in many cases in the epididymis.

A physician of Chicago, a man I know to have had considerable experience with the surgery of sterility in the male, told me his only success was in one case where he had made a little sac and aspirated the contents with a needle and injected the uterus. So we can not promise much by operative procedure; but we can take all cases where we find spermatozoa and go into those cases exhaustively and treat them for any trouble we find. If the spermatozoa are not as lively as they should be and there is an excess of leucocytes, if the patient is suffering from stricture or partial impotence, we can treat him and build him up and instruct him so as to improve the chance of fertilization.

DR. GEORGE C. MOSHER, Kansas City: I want to say in general we feel under great obligation to Secretary Goodwin and Dr. Vogt for this most interesting symposium on obstetrics that has been given us this afternoon.

In a specific discussion of Dr. Royston's paper, I believe this one suggestion of both Dr. Royston today and Dr. Young in Reynold's book "Fertility and Sterility in Marriage" that in from 30 to 40 per cent. of these cases of sterility the fault is with the male, should stick with us if nothing else does.

When a woman wants to have a baby and has been living in married life for several years and has been disappointed in her laudable ambition and she consults a doctor, the usual rule is to start with local treatment or endocrines and we say nothing about the husband as a possible factor. After a year of disappointment in that we come to say: "It may be the husband is to blame, which does not satisfy the patient nor bring a good result for our efforts."

Let us do as Dr. Young says. When the patient presents herself, start with friend husband; check him out first and see if he is not guilty. Afterward the wife's case is much more easily solved.

DR. WM. KERWIN, St. Louis: Whenever the maternal instincts of the mother are properly developed in the wife, it should be the effort of the physician to give to her that which is most dear. Dr. Royston covered the subject very well. There were a few points he left out because of the time allotted. The question of one-child sterility is important.

The question of fibroids as the cause of sterility is important. Dr. Giles has found fifty per cent. of the women with fibroids were sterile. Reversing the theory, sterility is the cause of fibroids. Whether this is true or not is questionable.

Then we have the question of occluded tubes as the cause of sterility. No one would choose to take from Rubin the credit he has earned in bringing to our attention the method of determining patent fallopian tubes. He has saved many women from abdominal operations. Like all medicaments, when first brought to our attention we have it through a wonderfully elaborate piece of machinery, a thing

that is simple enough to look at and yet expensive and complicated. I personally feel that I can determine occluded tubes as accurately with an ear-bulb syringe as with the apparatus.

BIBLIOGRAPHY

- Child: Sterility and Conception. Gynecological and Obstetrical Monographs. D. Appleton & Co. 1922.
 Hunner, G. L. Wharton, L. R.: *South. M. J.* **17**: 269 (April) 1924.
 Kelly, H. A.: *Medical Gynecology*. Ed. 2. New York. D. Appleton & Co. 1913, p. 346.
 Reynolds, E., and Macomber, D.: *J. A. M. A.* **77**: 169 (July 16) 1921. *Tr. Am. Gynec. Soc.* **48**: 99, 1921.
 McCollum, E. V. *The Newer Knowledge of Nutrition*. New York. The Macmillan Co. 1918.
 Osborne, T. B., and Mendel, L. B. *J. Biol. Chem.* **35**: 19, 1918, **41**: 275, 1920, *Science*, **45**: 294, 1917. *J. Biol. Chem.* **20**: 351, 1915. **23**: 439, 1915.
 Hart, E. B., and Steenbock, H.: *J. Biol. Chem.* **39**: 209, 1919.
 Steenbock, H., and Humphrey: *Research Bulletin*, No. 49, Wisconsin Experimental Station.
 Macomber, D.: *J. A. M. A.* **80**: 978 (April 7) 1923. **83**: 678 (August 30) 1924.
 Evans, H. McL., and Bishop, K. S.: *J. A. M. A.* **81**: 889 (September 15) 1923.
 Sure, B.: *J. Biol. Chem.* **58**: 681 (January) 1924.
 Huhner, M.: *Am. J. Obst. & Gynec.* **8**: 63 (July) 1924.
 Cary, W. H.: *Am. J. Obst. & Gynec.* 2s 406 (October) 1921.
 Rubin, I. C.: *J. A. M. A.* **84**: 486 (February 14) 1925.
Ibid. **74**: 1017 (April 10) 1920. *Ibid.* **75**: 661 (September 4) 1920. *Am. J. Roent.* **8**: 459 (August) 1921.
 Alvarez, W. C.: *Am. J. Roent.* **8**: 71 (February) 1921.
 Peterson, R.: *Am. J. Obst. & Gynec.* **2**: 349 (October) 1921. *J. A. M. A.* **78**: 397 (February 11) 1922. *Am. J. Roent.* **8**: 12 (January) 1921.
 Cron, R. S.: *J. A. M. A.* **79**: 713 (August 26) 1922.
 Peterson, R., and Cron, R. S.: *J. A. M. A.* **81**: 809 (September 22) 1923.
 Kennedy, W. T.: *Am. J. Obst. & Gynec.* **6**: 12 (July) 1923.
 Aldridge, A. H.: *Am. J. Obst. & Gynec.* **6**: 53 (July) 1923.
 Heaney, N. S.: *Am. J. Obst. & Gynec.* **6**: 581 (November) 1923.
 Dickinson, R. L.: *Tr. Am. Gynec. Soc.* **46**: 334, 1921.
 Curtis, A. H.: *Am. J. Obst. & Gynec.* **8**: 123 (July) 1924.

THE NON-TUBERCULOUS HIP OF EARLY LIFE

III. IN ADOLESCENCE

J. ALBERT KEY, M.D.

ST. LOUIS

As far as the hip is concerned the period of adolescence may be considered as beginning at about the eleventh year and lasting until the head and neck of the femur are united by bone. This occurs at about the nineteenth year. In spite of the strenuous life of the average adolescent and the frequent trauma to which the hip is subjected during this period it is relatively rare that it is either injured or becomes the seat of disease. For instance, tuberculosis of the hip is only about one-tenth as frequent in adolescents as it is in children. Also, with the exception of arthritis, the conditions mentioned in the two preceding papers as affecting the hips of infants and children are almost unknown in adolescence except as the aftermaths of conditions beginning in infancy or childhood. We have then for consideration traumatic lesions, developmental defects, neoplasms and pseudoarthritis of the hip.

Epiphyseal coxa vara is the only traumatic lesion which will be discussed in this paper. This is because, as I have pointed out elsewhere, the effect of trauma on the hip is determined by the anatomy of the hip rather than by the type of trauma. As the anatomy of the hip varies at different ages, certain traumatic lesions are characteristic of each age period.



Fig. 1. Epiphyseal coxa vara (right). Duration 2 years. The extremity is fixed in flexion, adduction and external rotation.

As the hip gradually changes from the condition found in the child to that of the adult the neck of the femur grows longer and thicker and the head increases in size. Probably the most important change in the anatomy of the hip is in the periosteum of the neck of the femur. In the child this periosteum is very thick and strong and is thrown into folds (the retinaculae of Weitbrecht) which span the epiphyseal line and firmly bind the head to the end of the neck. During adolescence the thickened periosteum of the neck gradually atrophies to that of the adult and the attachment of the head to the neck is consequently weakened. The result is that the point of least resistance in the adolescent hip lies in the epiphyseal line. The thickening of bone is more than adequate to overcome the slight loss in mechanical efficiency due to the increased length of the neck, and so fracture of the neck of the femur in adolescents very rarely occurs. The same is true of traumatic dislocation. As was noted in the preceding papers, the anatomy of the hip is such that sprains and contusions

of the normal joint are practically impossible at any period of life.

As a rule, then, when the hip of an adolescent is subjected to trauma, it either is not injured or it yields in the epiphyseal line and the head of the femur slips downward and backward on the neck causing an epiphyseal coxa vara. Boys are affected about three times as frequently as girls. The condition begins most often between the ages of 12 and 15 years but may occur as early as the tenth year, and cases have been recorded as beginning in patients 20 years of age.



Fig. 2. Epiphyseal coxa vara. Duration 1 year. The displacement of the head is well shown.

While epiphyseal coxa vara is here considered as a traumatic lesion of the hip it is by no means a pure traumatic lesion, as many of the cases give no history of injury and in most of the others the trauma is relatively slight. Furthermore in about 20 per cent. of these patients both hips are affected. This is sufficient evidence that the hip is relatively insufficient before the causative trauma occurs. The exact nature of this insufficiency is unknown. I believe that during a period of very rapid growth the periosteum which crosses the widened epiphyseal cartilage is stretched and thinned with a resultant weakening of the union between the head and neck of the femur.

The usual history in these cases is that some months previously the patient had a slight injury to the hip which caused a dull pain in the hip or knee. The symptoms cleared up but returned some weeks later. There may have been a number of such attacks and each may have followed a mild injury. In some cases there is absolutely no history of any accident to the hip and the onset is gradual. In other instances the trauma results in severe pain and immediate complete disability of the hip, such as occurs in a fracture of the neck of the femur.

The symptoms vary in acuteness from time to time and are usually relieved by rest. When

first seen the patient may be confined to his bed with an acute hip or may be pursuing a normal life with no pain and only a moderate limp. The temperature is not elevated and there are no signs of systemic disease.

On physical examination the affected hip is found to be in a position of adduction and external rotation, and there is usually some permanent flexion. (Fig. 1.) The limb is shortened from one-half to one inch and the trochanter is prominent and its tip is above Nelaton's line. If the condition has been present for some time there is a moderate amount of muscular atrophy. The hip may be almost completely ankylosed or the movement may be fairly free. Abduction and internal rotations are always limited. The degree of the limp varies from time to time and in different cases. A positive Trendelenberg is often present and the gait resembles that of an old, unreduced congenital dislocation of the hip.

The X-ray shows the abnormal relationship between the head and neck of the femur. The head is displaced downward and backward on the neck, and the postero-inferior border of the end of the neck is usually embedded in the epiphyseal surface of the head. The degree of displacement of the head varies in different cases and may progress in a given case over a period of months or years until a very slight slipping is converted into a complete displacement of the head. (Fig. 2.)

On the whole the clinical picture is characteristic and to one familiar with the condition the diagnosis is not difficult. In an adolescent the deformity of the hip in adduction and external rotation is almost pathognomic. In spite of the fact that epiphyseal coxa vara is probably the most frequent pathological condition to which the adolescent hip is subject, it seems to be a rather poorly known condition and many of the cases are diagnosed tuberculosis of the hip and are treated as such.

The treatment varies with the conditions present at the time of examination. If the case is seen within three weeks after an acute separation of the epiphysis the patient should be anesthetized and an attempt made to replace the head by Whitman's maneuver (flexion, internal rotation, traction in extension and abduction). The hip is then fixed in a large plaster spica in abduction, internal rotation and extension.

In cases of longer duration and in early cases in which it has not been possible to secure anatomical reposition by manipulation, the hip should be opened and the head pried loose from its abnormal attachment to the neck and replaced in its normal relationships. The wound should then be closed and a large plaster spica applied as mentioned above.

In younger adults it is usually wise to content oneself with a subtrochanteric osteotomy and correct the deformity present. In older adults rest and physiotherapy should be tried for a long time and operation only resorted to after these have failed. Then the operation of choice is a rapid subtrochanteric osteotomy followed by correction of the deformity.

The developmental conditions which will be considered as affecting the adolescent hip are coxa valga and incomplete dislocation of the hip. Coxa valga may be defined as a condition of the hip in which, with the head of the femur in its normal position the extremity is maintained in a position of abduction. Almost without exception the condition is due to an increase of the angle between the neck and the shaft of the femur, that is, they are more nearly in a straight line than in the normal hip. Coxa valga may be divided into primary and secondary types.

Primary or idiopathic coxa valga is a rather rare condition and is probably a congenital deformity. However, as a rule the condition is not noticed until adolescent life. Then the parents are struck by the peculiar awkward gait of the patient. The hip is not painful and there is not a definite limp. In walking the patient has a tendency to sway to the affected side when weight is borne on the affected extremity. The condition is often bilateral and in such cases the patient sways from side to side in walking.

The diagnosis is difficult and as a rule is not made unless an X-ray is made of the affected hip. The movements of the hip are free and painless. The affected limb may be slightly longer than the normal one. The X-ray of course shows the deformity in the neck of the femur. The normal collo-diaphyseal angle is 120 to 130 degrees. In coxa valga the angle between the neck and the shaft of the femur is 140-170 degrees. (Fig. 3.)

Having made the diagnosis of coxa valga, what should one do? In a mild case the musculature of the hip should be strengthened by exercises. In a severe case the angle of the neck may be decreased by performing an intertrochanteric osteotomy, adducting the limb and suturing a small wedge of bone between the gaping outer lips of the osteotomy wound. The wound is then closed and a large plaster spica is applied, care being taken not to displace the fragments.

Symptomatic coxa valga develops in hips which for any reason are deprived of the weight-bearing function during the growing period. The most frequent cause is infantile paralysis. As a rule treatment is directed to the primary disease and the coxa valga is ignored. It may, however, be a potent factor in

a limp which persists and if our treatment is to be ideal the deformity should be corrected. (Fig. 4.)

Closely allied to coxa valga in symptoms and not infrequently associated with it is an incomplete dislocation of the hip. In this condition the head is not completely out of its socket but rides upon the posterior superior border of the acetabulum. The condition is quite rare and while it is probably a congenital deformity, the symptoms are not as a rule noted until adolescence. At that time it is seen that the hip is weak and it may be painful after exer-



Fig. 3. Coxa valga. Idiopathic. No bone atrophy.

tion. A mild limp may be present. The physical examination is essentially negative. A slight shortening of the extremity may be noted and the Trendelenberg may be positive.

The diagnosis is made by the X-ray which shows the minor displacement of the head of the femur.

The treatment is rest and exercises with support to the hip. Adolescent hips do not tolerate severe manipulations followed by long periods of immobilization as do the hips of young children. If one of these hips be manipulated and treated as is routine for a congenital hip the surgeon may be later embarrassed by a loss of motion which he is powerless to restore.

Bone tumors may of course occur in adolescents. Sarcomas for some unknown reason tend to occur in the region of the knees and are rare in the region of the hip. Benign bone

cysts, however, occur more frequently in adolescence than in any other age period and a not uncommon localization is in the upper end of the femur. The only symptom may be a moderate amount of pain in the region of the hip. In some instances the first symptom is a pathological fracture and the bone cyst is diagnosed in the X-ray of the fracture. A characteristic X-ray shows a rarefied area in the medulla of a long bone which may extend up to the epiphyseal line but does not invade it. The cortex may be thinned and expanded but it is not perforated.



Fig. 4. Coxa valga, bilateral, due to infantile paralysis affecting both lower extremities.

In the healing of a pathological fracture due to a bone cyst, the cyst is often cured. The surgical treatment of these lesions is to expose the cyst by removing the portion of the overlying cortex and then thoroughly remove the cyst contents and fibrous wall with a curette. The cavity is then swabbed with iodine or carbolic and alcohol and the wound closed. Radical incisions and amputations are unnecessary mutilations and for this reason the possibility of a cyst should be excluded before such operations are performed for the treatment of bone tumors.

The arthritic lesions of the adolescent hip do not differ materially in the clinical picture from those discussed in the section on the hip in childhood and so will not be dealt with here. It may be stated, however, that an acute suppurative condition in the region of the hip in an adolescent is more often an arthritis than an osteomyelitis, while in childhood the reverse is true. These suppurating hips in adolescents are apt to heal with a bony ankylosis very quickly. Fig. 5.) Consequently after the hip is drained it should be maintained in a

good functional position, as it tends to assume a position of abduction and flexion.

By pseudo-arthritis of the hip is meant any condition which simulates a lesion in the joint but in which the joint is normal. Owing to its deep-seated location the hip is not infrequently suspected when the disease is elsewhere. The symptoms may be due to inflammation in the neighborhood of the hip or to irritation of the ilio-psoas muscle.

The inflammation in the region of the hip may be in the soft parts or in the bone. In the soft parts the most common lesions are subgluteal abscess or bursitis of the subgluteal or ilio-psoas bursae. The lesions of the bone are an osteomyelitis of the pelvis, usually the ilium, or of the upper end of the femur or an epiphysitis of either the greater or lesser trochanters. The lesions of the soft parts can usually be diagnosed by the localized swelling and tenderness. In the lesions of the bone the diagnosis is more difficult. In the early cases the X-ray is of course negative. The patient is often acutely ill and early operation is imperative. The tenderness may be wide spread over the region of the hip and the muscle spasm intense. By proceeding very gently, however, one can usually obtain a certain amount of painless motion in the hip and thus eliminate it. Then the differentiation of the femur from the ilium is made by the local signs. The operation should be performed as soon as possible after the diagnosis is made and the focus adequately exposed and drained.

In the lesions of the trochanter on the other hand the patient usually is not acutely sick and there is no definite indication for operation. The epiphysitis is usually due to an organism of low virulence and the symptoms may resemble very closely those of a tuberculosis of the hip, and the diagnosis is only possible after some weeks when the X-ray shows new bone formation around the focus. These mild cases usually subside under rest, but if symptoms are still present when the diagnosis is made they should be explored, curetted or excised, and drained.

In examining a hip in which the diagnosis is not perfectly clear cut one should never fail to examine the spine and the lower abdomen and pelvis, as pus or inflammation along the ilio-psoas muscle not infrequently causes spasm of the muscle with flexion deformity of the hip. The frequency with which a flexion contracture of the hip is found in tuberculosis of the spine is notorious. Somewhat less well known is the fact that retroperitoneal abscess may cause a flexion contracture of the hip. I once received a case which had been diagnosed tuberculosis of the hip by three different physicians. The hip was fixed in 90 degrees flexion,

but if the flexion was increased the hip could be rotated without pain. There was a fulness in the lumbar region and slight tenderness here. An incision carried down through the lumbar fascia evacuated a large amount of thick, foul smelling pus which had evidently been present some weeks. The boy made a prompt recovery, but a period of traction was necessary to cure the flexion deformity of the hip.

Another somewhat similar case was that of a boy 7 years of age admitted to the orthopedic ward for a tentative diagnosis of tuberculosis of the right hip. A more careful examination gave evidence of an abdominal lesion and an exploratory operation revealed a walled off appendical abscess.



Fig. 5. Hip ankylosed in abduction from suppurative arthritis in adolescence.

Among the cases of pseudo-arthritis of the hip one may place the hysterical hips. Fortunately these are rare. The diagnosis is difficult and should be made with great care. In the hip the deformity is apt to vary from day to day and the distribution of pain is atypical. As a rule there is no objective sign of disease other than the fixation of the joint. However, in cases of long duration atrophy and contractures may develop. The treatment should, when possible, be directed by a neurologist.

It is to be noted that these pseudo-arthritic conditions are not limited to adolescence but may also occur in children. In this rather sketchy review of the non-tuberculous hip in early life many of the rarer conditions have of necessity been omitted, and of those mentioned

none have been dealt with in detail. The purpose has been to try to emphasize the fact that the hip in early life is subject to a wide variety of pathological conditions and that the more important of these tend to occur in the definite age periods.

Even after a careful history has been taken and a physical examination including extensive laboratory and roentgenographic studies has been made, many of these hips in early life remain obscure. Some of them require long periods of observation under various therapeutic regimes before an intelligent diagnosis or prognosis is possible. A certain percentage of them will always remain a puzzle to us. If more of us will study carefully and keep accurate records of the course of the children who limp, especially those who are not sick or markedly disabled, and publish our observations from time to time, this group of unsolved problems will decrease with the years.

435 University Club Bldg.

MENTAL SYMPTOMS FOLLOWING HEAD INJURIES

B. LANDIS ELLIOTT, M.D.,
KANSAS CITY, Mo.

It is a widely accepted belief that physical injury, especially to the head, is apt to be followed by after-effects in the way of nervous or mental disturbances of various sorts. The great majority of such disturbances, especially when there is no injury to the head, are of functional character. Especially when we have a history of head injury, with probability that the injury was of sufficient severity to injure the cranial contents, the question of a traumatic neurosis or psychosis presents itself.

Although such cases do not form a large proportion of all cases of mental disorder their importance from the medico-legal standpoint is considerable and they are interesting as illustrations of the effect which a physical injury may have on the mental processes.

Statistics are always interesting, but one must often accept them with a certain degree of caution and bear in mind that their chief value lies in showing certain general tendencies. The medical records of the German Army in the Franco-Prussian War of 1870 showed that of 8,985 cases of head injury only thirteen led to gross mental disorder. Stolper has collected 981 cases of head injury, 138 of which were severe concussions, with twelve cases of mental disorder. Bullard reviewed seventy old skull fracture cases and found that thirty-seven of the patients complained of no symptoms; eight presented very slight symp-

tons; eighteen had more troublesome manifestations; while seven had serious disability which interfered with their ability to earn a livelihood. Roeper assumes that mental changes are present in one-fourth to one-third of those sustaining severe brain injuries.

The present communication is based on a study of fifty cases in which accurate records exist extending back in most cases over a period of about six years; in one case over nearly twelve years. Cases of skull fracture have been chosen, not because the fracture of the cranial bones is of prime importance but because a fracture of the skull usually indicates severe injury. An injury may not involve a fracture of the skull and yet cause serious damage to the brain. Indeed, it is possible for serious after-effects to follow an injury which has left almost no external evidence.

In this discussion I wish to exclude from consideration cases of traumatic epilepsy and cases in which focal lesions in the brain are prominent features, as well as cases in which the symptoms are purely functional or hysterical in type. Some caution must be observed in selecting the material upon which conclusions are based. One must be careful to eliminate pre-existing mental disorder, or psychopathic state,—cases in which the injury is merely the precipitating factor that brings to light a latent paresis, dementia precox or other psychosis, and cases in which alcoholism or syphilis are complicating factors.

Immediately after an injury there may be symptoms of "concussion" with weakness, giddiness, nausea, pallor, some degree of confusion and slow pulse. There may even be coma. In some instances the post-traumatic delirium occurs, with disorientation, confusion, some tendency to fabrication, psychomotor restlessness, fleeting delusions and hallucinatory experiences. An interesting phenomenon is the "retrograde amnesia" which often occurs. The loss of memory dates not only from the moment of injury, but may include a period antecedent to the injury. This usually clears up within a comparatively short time.

The immediate symptoms may clear up completely. In some cases, however, there are more or less permanent changes. Here we may recognize four main groups. In the first group we will place the cases with mild nervous or psychoneurotic manifestations; in the second those characterized by epileptic phenomena; in the third those with a psychopathic reaction; while the other group will consist of those cases in which there is a general intellectual deterioration, with loss of memory as rather a prominent feature.

In many cases after the acute symptoms following the injury have disappeared the pa-

tient still complains of dizziness, headaches, general nervousness, inability to concentrate, irritability, inability to stand heat, etc., and in the majority of such instances examination fails to disclose neurological signs of organic involvement of the central nervous system, and many times in the absence of a history clearly indicating an injury such cases are regarded as psychoneurotic. Disability may vary in these cases from mild discomfort to marked inability to carry on a gainful occupation.

Roeper has endeavored to set forth a definite symptom complex, the essential features of which are emotional instability with a tendency to quarrelsomeness and dissatisfaction, and inability to control the temper. There is intolerance for thermic, toxic, optic and acoustic stimuli. There is a marked intolerance for alcohol and for intensive mental or physical work. The patient may show extreme lack of interest in his environment without any real intellectual defect. This corresponds fairly well with the so-called "post-traumatic constitution" in which there is emotional instability, lack of self control, marked susceptibility to the action of alcohol, etc., but without much involvement in the intellectual field.

In this series there are fifty cases. The present ages of the patients range from twenty-three years to forty-seven years, the average being a little over thirty-one years. As regards occupation, two were physicians, four students, fifteen skilled workmen of various sorts, the balance being farmers and laborers.

All of these patients sustained fractures of the skull, about half of these being due to gunshot wounds, while the balance were due to various causes, such as fall from an airplane, motorcycle accident, kick by horse, blow from a train, etc. There were six basal fractures.

Sixty per cent. of these cases show neurological signs, such as pupillary inequalities and irregularities, inequalities in deep reflexes, cranial nerve involvement, positive Babinski, phenomena which are generally accepted as indicative of organic involvement of the central nervous system. Five cases show marked mental deterioration. Five of the cases were operated upon, decompression operations being performed. One case was definitely worse after operation, with development of positive signs of organic brain disease.

As an example of the milder type of disability may be cited the case of a patient who complains of headaches, defective hearing in the left ear, inability to concentrate and general nervousness. He states that he does not sleep well and that all of his troubles seem worse in hot weather. A record from the Minneapolis City Hospital shows that in 1918 this patient fell from a train and was treated for a fracture

of the skull, the diagnosis being confirmed by X-ray.

Another patient has almost continuous frontal headache and frequent dizzy spells, brought on by heat or unusual stress. He complains of more trouble in warm weather and that his memory is not as good as it was formerly. Army records show that this man was struck in the forehead by shrapnel in September, 1918. He was unconscious or semi-conscious for over a week. He remembered none of his military experiences for about a week after regaining consciousness. At first he could remember only his name, his mother's name, and the name of the state from which he came. After treatment in different hospitals for several months he was discharged from service as in good physical condition, but now has the symptoms described above.

A more severe impairment is seen in the case of a young aviator who crashed in an airplane in the fall of 1918, sustaining a basal fracture of the skull. He was unconscious for ten days and a decompression operation was performed. Army records show that he was treated for "traumatic psychosis." A medical report dated March, 1919, described him as "a bright college student with alert mentality, now confused, uncertain, with loss of memory, lack of confidence in himself and no initiative, as the result of injury." An examination in February, 1922, showed no evidence of gross organic involvement of the central nervous system. Mentally, he showed a tendency to forget things easily, a hesitation in speech, and a lack of confidence in himself. The patient had to keep a notebook in which he entered all of his engagements and numerous minor items which almost no one finds it difficult to remember. This patient has made a slight improvement since that time, but his condition is still far from satisfactory.

An interesting case is that of a former lieutenant-colonel in the medical corps, forty-two years of age, who was thrown from a motorcycle in France sustaining a fracture of the base of the skull. He was unconscious for four days, had hemorrhage from the right ear and blood in the cerebrospinal fluid. Since that time he has complained of headaches, vertigo, deafness in the right ear, impaired memory, inability to concentrate and great emotional instability. Upon examination in February, 1923, he complained of loss of memory, great irritability with explosive outbursts of temper and hypersensitiveness of the right side of the face. He also complained that the right arm and hand were colder than the left. His deafness was diagnosed otitis media by the otologist. He had a fine tremor of the fingers. The cremasteric reflex was sluggish on the left,

absent on the right; the right side of the face was hypersensitive to painful stimuli and the right hand colder to the touch than the left.

During the examination his attention wandered frequently and he often had difficulty in finding the word he wanted next in conversation. He complained that he lacked confidence in himself and that he went to pieces easily under stress. The patient complained of his inability to remember names and people and of irritability and emotional instability. He complained that he was unable to control his emotions so that when anything amused him he would laugh immoderately, while on the other hand he was very easily moved to tears. These manifestations had caused him so much embarrassment that he avoided social gatherings of all sorts, church services, theatrical performances, etc.

From the standpoint of prognosis a case which illustrates how unfavorable the outlook may be at times is that of a man who was struck by a train in 1913, suffering a depressed fracture of the skull. He was inducted into military service in 1918 but was discharged in a few months on account of disability. He complains now of headaches, dizziness, inability to stand heat and general nervousness. These symptoms are worse in hot weather and better in cold weather. The patient is slow and stupid and is unable to support himself because he has no efficiency as a workman. The record indicates that his condition has been about the same ever since his injury in 1913.

The cases reviewed may be divided roughly into three groups. There is a group of five cases in which there is marked mental disturbance with practically complete incapacity to earn a livelihood. There are about fourteen cases with disturbances which are serious but not completely disabling, while the balance, a group of thirty-one cases, show rather mild symptoms which are more or less disabling but do not constitute handicaps of major importance.

It is quite evident that in some of these patients the mental functions have been seriously and permanently affected. I believe we may safely assume that if the acute manifestations do not clear up within a few weeks, the prognosis must be rather unfavorable.

This question presents itself: "What pathological changes may be the basis for such profound and lasting mental disturbances?" We know of course that many times at autopsy in cases of severe head injury, contusions and lacerations of brain tissue are found with or without fracture of the skull. There may be also multiple small hemorrhages throughout the brain. Meningeal adhesions, obstruction of the sinuses, particularly the longitudinal, and

actual concussion of the brain are believed by various authors to play some part in the pathogenesis of the symptoms. Since we have knowledge of many focal lesions in the brain unaccompanied by mental symptoms we might expect the lesions responsible to be diffuse.

Some interesting experimental work bearing on this question has been carried out. Cannon produced concussion experimentally in animals and demonstrated that there was a rise in intracranial pressure following it. Scagliosi in his animal experiments on concussion found that diffuse degenerative changes in the cells of the brain and spinal cord followed. Meyer suggests that the swelling of the tissues and increase in intracranial pressure may interfere with nutrition and aggravate the damage done by the injury, causing temporary malnutrition with a certain degree of necrosis and subsequent repair, so far as repair is possible. Mott has reported the pathological findings in two cases of concussion due to proximity to the explosion of a large shell. Examination after death showed no evidence of external injury. In these cases there was no fracture of the skull but multiple puncture hemorrhages were found scattered widely throughout the brain.

In the beginning the treatment of these conditions is usually a surgical problem, since the patients are seen by the surgeon. It is obvious of course that after nerve cells have been irreparably damaged and the results of an injury have become fixed, no very great improvement can be expected from treatment.

It is not my purpose at this time to enter into a discussion of the surgical treatment of head injuries but it seems to me that emphasis might well be placed on two phases of the matter. First, the relief of increased intracranial pressure should be an important consideration in an effort to minimize the damage to nerve cells and thus to avoid if possible some of the disastrous sequela. Second, a longer period of freedom from activity following even comparatively minor concussion cases should be enforced.

1010 Rialto Building.

REFERENCES

- Meyer, Adolph. The Anatomical Facts and Clinical Varieties of Traumatic Insanity. *Am. Jour. Insan.*, 60: 373, (Jan.) 1904.
- Frazier, C. H., and Ingram, S. D. A Review of the Effects of Gunshot Wounds of the Head. *Arch. Neurol. and Psychiatry*, 3:17, (Jan.) 1920.
- Mott, F. W. The Lettsomian Lectures on the Effects of High Explosives on the Central Nervous System. *Lancet* 1:331, 441, and 545 (Feb. 12, Feb. 26, and March 11, 1916).
- Mott, F. W. The Microscopic Examination of the Brains of Two Men Dead of Comotio Cerebri Without Visible Signs of Injury. *Brit. Med. Jour.*, p. 612, (Nov. 10) 1917.
- Oppenheim, H. Die Neurosen nach Kriegsverletzungen. *Neurol. Centralblatt*, 34:810, (Nov. 1) 1915.
- Roeper, E. Leichtere Geistige Störungen nach Kopfschüssen. *Neurol. Centralblatt*, 39:721, 1920.
- Southard, E. E. Shell Shock and Neuropsychiatry. Wm. Leonard, Boston, 1919.
- Hadley, E. E. The Mental Symptom Complex Following Cranial Trauma. *Journal of Nervous and Mental Disease*, Vol. 56, No. 5, Nov., 1922, p. 453.
- Michael, Joseph C. The Old Head Injury Case. *Jour. A. M. A.*, Vol. 80, No. 15, (April 14, 1923) p. 1047.
- Holbrook, Francis R. Head Injuries. *J. A. M. A.*, Vol. 83, No. 7, (Aug. 16, 1924) p. 489.

HISTORY OF THE NEW MADRID COUNTY HEALTH UNIT

JUDGE X. CAVERNO

Presiding Judge of the New Madrid County Court at the Inauguration of the Health Unit

CANALOU, MO.

In every constructive human undertaking there are four mental problems which must be solved before construction can begin: 1. The ideal. 2. The inventory of material on hand and conditions which must be met. 3. The inventory of other materials required. 4. Ways and means which must be adopted if number two and number three are to be welded into the likeness of number one. Reduced to simpler language, the problems are: What do we want? What have we got? What do we lack? How are we going to do it? The method applies to making a cake, building a pig pen, constructing a building, or organizing a church.

A county health unit is no exception if it is to class as a "constructive human enterprise," to which class the New Madrid County Health Unit has ambitions to belong. "I prefer to confine myself to regular public health methods," remarked the health officer from another county. He is occupying a position, not making one. To him a county health unit is a perfected machine, designed and built by experts and sent out from Jefferson City ready to run. He is the chauffeur. We find the machine not exactly suited to our conditions so we are doing a little designing, constructing, and testing on our own hook, hoping that our experiments will not only benefit our own people but that they will help the factory at Jefferson City in designing and building a better machine and in selling one to every county in the state; and, what is more important, keeping it sold. In this we have had the finest kind of cooperation from the State Board of Health and the other agencies for the promotion of public health which work through it.

Our ideal? What do we want? Well, of course even ideals must be practical. Every girl wants a pearl necklace and every boy wants a Rolls-Royce, but most of them will get farther if they build an ideal about the size of a string of beads or a roller coaster. What we have and what we lack are number two and number three in executing our ideal, but they are generally number one in adopting it.

Any one making an inventory of "what we

had" in New Madrid County, and classing as assets and liabilities, would certainly have judged us insolvent, but we have managed to keep out of bankruptcy by capitalizing our liabilities and transferring them to the assets column. County courts, doctors, part time health officers, politicians, high taxes, poverty, prejudice, selfishness, cupidity, stinginess, lack of funds, political landslides—all these we managed to get into the assets column.

With \$1,800 left over from the war in the Red Cross treasury, and a record of \$2,400 spent by the county the previous year meeting the requirements of the law with a part time health officer, and with \$3,600 from the State Board of Health to dangle before the court as clear gain to the county, and only \$1,800 asked of the county court, our start looked like a cinch. But one of the judges, a druggist, said he would have to call his doctor friends into council and abide by their decision. And so it happened that our infant health unit was ushered into the family by the doctors, as it is desirable that infants should be.

Our inventory at birth included a doctor, a nurse, a small incidental fund and an office in the cleanest and most attractive court house in Missouri; a strictly rural county with a few towns on its margin having no common interests and separated by great areas of newly reclaimed swamp land; with a system of "soft roads," many of them impassable during a great part of the year and at their best a hard adventure; with a farm population largely recruited from the loggers who came in to clear the land; with "shacks" the rule and houses the exception; with sanitation an unknown word; with a sprinkling of northern farmers, who had come on to the new lands; with a thread of "ridge land" occupied by descendants of the old South and having little contact with or knowledge of the dwellers in the swamps or the non-resident investors and speculators who reclaimed the swamps and owned the land; with eighty-five per cent. of tenacy—the highest in the state.

David and Goliath were not so ill matched.

THE IDEAL

A sound mind in a sound body for every one was too big an ideal for us to tackle at once and so:

Because we could reach all the schools but not all the homes.

Because through the school children we could establish contact with the homes.

Because the children are so helpless to help themselves.

Because the future is easier to mold than the past.

Because the enormous sums spent for edu-

cation are largely wasted through lack of sound bodies and brains to put sound minds into, we adopted this ideal:

"Sound bodies for the school children for the school teacher to put sound minds into."

We started with the routine system of physical examination, of weighing and measuring, of score cards and blue stars and gold ones, and found the way to our ideal blocked by defects beyond the reach of good advice, beyond the reach of the home pocket-book, beyond the facilities and practice of our doctors. New Madrid County had no hospitals and no surgeons!

OUR HOSPITAL

The architect of our court house provided for the needs of juries and witnesses who must be kept "incommunicado" by partitioning off two large rooms in the attic and, having some extra space left around the central skylight, he threw in a couple of extra rooms. A little white enamel, a little raid on the incidental fund for equipment, and a little legerdemain on the part of Dr. O'Bannon and we had two large airy ward rooms, with thirty beds, a very professional looking operating room, and a storeroom which serves as a ward room for colored patients when required.

Dr. W. E. Yount, of Cape Girardeau, volunteered as surgeon for our first nose and throat clinic. It was to be a free clinic; parents were notified through the children of the opportunity and instructed to make application through their family doctor. It was an experiment; we did not know whether we would have any patients. Poor people who lack knowledge are apt to think of hospitals and operations as a sort of slaughterhouse affair and recoil from them. So the doctors sent almost anyone who volunteered and there was a liberal sprinkling of patients who would have been pay or part pay patients under ordinary circumstances. The clinic was a great success, twenty-eight operations and a long waiting list left over.

With success assured as far as patronage is concerned, we felt that some standard of admission should be set and some method adopted which would be so clear that the health unit would be protected from criticism due to misunderstanding of our aims and limits. The system we adopted we recommend confidently to every County Health Unit. We appeared before the County Medical Society and placed our problems before them in substantially this way:

"Gentlemen: The first line of offense and defense in the battle for the public health is the private practitioner. Anything that makes New Madrid County a poor field for good doc-

tors is the most direct blow possible at the public health. But, a doctor, *ex-officio*, holds a position of public responsibility. If the private practitioner is ever superseded or has his practice cut into by a public practitioner, it will be because he fails to realize this responsibility and act on it.

"The best field for a doctor is where people are well, not where they are sick. A high standard of health and high earning capacity promoted by the public health work are an asset not a liability to the local doctors.

"A child needing medical or surgical treatment but unable to pay for it is not an asset to a doctor but is a liability to the county. It is inhuman that such a child should suffer or be deprived of the opportunity for health and happiness because of a theoretical line between private practice and public responsibility. We want you to go one step farther. You will find cases in which the child needs help and the parents will not pay for it even though they are able. In such cases we ask you to be guided by the needs of the child rather than the fault of the parents.

"Now, gentlemen, the question arises as to who is to make these decisions as to where this line runs. We have decided that you are. We ask you to become the staff of the New Madrid County Health Unit and Hospital and take the responsibility of drawing this line between private practice and public responsibility."

This arrangement has worked almost perfectly. Under it patients are classified according to their ability to pay and the fee is divided equally between the family physician, the operating surgeon and the equipment fund of the Health Unit. The doctors bring their own patients of all ages as well as those discovered by the Health Unit in the schools.

Since our first nose and throat clinic on August 25, 1922, we have had four more, one of two days' duration, with an average of over thirty operations a day, or one hundred and eighty-four in all. There have been a few full pay patients who might have gone elsewhere for the needed operation, but practically all of the patients would have carried their handicap for life if it had not been for this local opportunity. Nobody lost; everybody gained.

EYE CLINICS

Examination of the school children showed a good deal of defective vision and "sore eyes." We have held five eye clinics, with nearly one thousand registered; approximately one-fourth have been fitted with glasses.

TRACHOMA

Dr. Robert Sory, of the U.S.P.H.S., has been with us in two of our eye clinics at which

five hundred and eighty-seven were registered. He diagnosed sixty-four cases as true trachoma and operated on forty. All having granulated lids were provided with medicine and instructed in home treatment.

When the Missouri Commission for the Blind held an examination of applicants for pension we had a representative present. We found that out of sixty-two examined twenty had lost their sight from trachoma. We traced these cases back to their homes and found a large percentage of members of families infected. These we have taken care of in our clinics and through home treatment and have given information which will help to prevent the spreading of the disease.

EPIDEMICS

Outbreaks of diphtheria have been stopped by giving 190 toxin-antitoxin treatments in co-operation with local doctors, who charged a nominal fee from those able to pay. In several sporadic cases and in one epidemic of typhoid the Health Unit has made zones of safety around the focus of infection by vaccinating over four hundred people.

But figures give little idea of the value of our clinics, especially as to their influence on public sentiment and the county court in the continued support of the health unit. Regular public health work is apt to strike people as coldly instructive or irritatingly restrictive. The human line of least resistance runs through the heart and it must come from the heart. Our county nurse and the volunteer nurses at the clinics give to the poor and helpless, and more important still, to their children, sympathetic and skillful care, and this is as good for those who give as for those who receive. The line between high and low, rich and poor, is not so sharp on account of this influence.

Founders of county health units will do well not only to make a study of the human heart; they should also take a full course of study in the duties and responsibilities, trials and tribulations of county courts. The legislature has been exceedingly generous in assigning duties and responsibilities to county courts but not at all thoughtful in providing ways and means to meet them. The maimed, the halt, the blind, the widow and the fatherless, and those that are in misery and affliction, pass in endless review before our county courts. Each case requires investigation and just but sympathetic judgment. Our health unit has volunteered to help the court in all such cases and in this way has made itself almost indispensable. The judges have the satisfaction of knowing that these unfortunates are being treated in a humane way and that the interests of the tax payers are being guarded at the same time.

The county poor farm is inspected every week and the inmates with chronic diseases get medical care without extra expense. Reported cases of abuse of children, of lack of proper care, food and clothing, receive a visit from the nurse rather than the sheriff. Why wait until the child is in the hospital and the father in jail? We may not be in line with "regular practice" but we are up to date. We practice preventive medicine.

Among our assets we have listed lack of funds. Here's how. At the end of the first year we had only a small part of the required \$1800 in the Red Cross treasury. This made it necessary to canvass the county for funds and this gave the opportunity to explain the work of the health unit and "sell it" to a wide range of influential people, and (note this!) to explain that we would not have to come again next year if the county court would appropriate the full amount of \$3600 required of the county. At the end of the year all of these people were reminded that the time to talk to the court or write a letter had arrived. The response was practically unanimous. This was not only putting pressure on the court; it was putting public sentiment back of them also. And this they had a right to for the court represents the tax payers and the tax payer wants to be shown. And we can say that the health unit pays its way; that a part time health officer making the inspections and stamping out epidemics as required by the law, and the cost of hiring extra help to do the welfare work done by our health unit, would call for as heavy a draft on the county treasury leaving the county all to the good on the \$3600 furnished by the state and the increased service. And in service rendered there is no comparison.

TAXES

The prosperity of any county depends on the earning capacity of its inhabitants. The greatest tax levied is the ill health tax. It is collected at "the source" and collected in advance, but no one gets it. The lost days' earnings are a dead loss.

Taxes paid the county are high or low according to earning capacity. The same number of dollars may be high taxes to a sick man and low taxes to a well man. The way to reduce taxes is to increase earning capacity. In a multitude of cases we are doing that.

At our first nose and throat clinic a man drifted in nearly blind with a membrane growing over his eyes (pterygium). In three months he would have been hopelessly blind. A man in middle life, a farm hand without relatives, he would have been a charge on the county or state for many years. Dr. Yount operated and

the man's sight was saved. He is an asset, not a liability to the county.

One of our doctors brought in a young woman with a large and rapidly growing tumor. She was poor and surgeons and hospital fees were beyond her reach. Dr. McRaven and Dr. Cochran of our own staff removed the tumor and restored this woman to health.

A girl of sixteen, an orphan living with friends, themselves poor, was sent to us for diagnosis of a swelling on her arm. We took her to Cairo to Dr. Flint Bondurant who pronounced it sarcoma and offered to come over to our hospital and amputate the arm without charge. As he was going on a vacation next day and as haste was necessary we called up Dr. Schultz, of Cape Girardeau, who volunteered and brought his wife, herself a nurse, and his assistant, Dr. Carl A. W. Zimmermann, and the rich little poor girl had all that modern science and tender care could offer. She is on the high road to recovery, a changed and happy girl removed from the shadow of death.

With mute advocates like this to appeal to the public and the county court we feel that our health unit is a permanent fixture and our hospital just a beginning.

CARCINOMA OF THE PENIS

JNO. B. CARLISLE, M.D.

SEDALIA, MISSOURI

Carcinoma of the penis is usually thought of as a rather rare condition. However, when we consult the literature we find that it is not as common as usually thought. Adami and McCrae¹ and Billroth say that these carcinomata compose three per cent. of all the carcinomata in men. Other writers place their occurrence at a smaller per cent., some even below one per cent.

Many predisposing causes are mentioned in the etiology of these tumors. Phimosis is generally spoken of as the chief cause. A tight foreskin is thought to traumatise the glans and at the same time retain the smegma. Great stress is laid by many writers on phimosis. In the case being reported as well as in many others there is no history of phimosis. Veneral warts, moles, and keratoid growths are also spoken of as predisposing causes.

According to Hertzler² carcinoma of the penis may be described under two forms. The first of these is the one most commonly seen. This is the cauliflower type. The other, which is "much rarer, is the superficial ulcer covered with fine nodules." The sulcus and the inner

edge of the prepuce are the most frequent sites for these tumors. Ordinarily the cauliflower type starts as a small red papule with an irregular surface and deep infiltration of the border. This continues to enlarge until deep folds and clefts are formed. The circulation is disturbed and deep ulcerations result. Usually, as mentioned above, these tumors start on the glans. Invasion is rapid and extends from the plans onto the shaft, sometimes involving the greater portion of the latter. Invasion of the shaft leads to invasion of the bodies of the penis and severe hemorrhages may follow. In those cases in which there is phimosis the tumor mass will frequently erode through the prepuce. The inguinal glands are the earliest site of extension. Metastasis is very uncommon elsewhere.

These tumors rarely ever give the patient any discomfort. Apparently they have very little pain and then usually not until late in the development of the tumor. With involvement of the inguinal glands pain is sometimes encountered in the perineal and inguinal regions. The usual complaint is the odor after the ulcerations have occurred. The urethra is usually eroded in a number of places causing the urine to escape from a number of different openings.

The diagnosis of these cases is seldom very difficult. The case when seen ordinarily is well advanced. They may, however, be confused with luetic condylomata. In the late cases the cauliflower appearance of the mass is too typical to permit error. The second type mentioned above is the one that is usually wrongly diagnosed.

The treatment in such cases is amputation. Where there is involvement of the inguinal glands these should also be removed at the time of operation. The amputation of course should be done a safe distance back of the tumor mass. In the case to be reported the treatment was instituted only as a palliative measure.

REPORT OF CASE

C. C. Sore on the "privates." F. H. Father died at 74 years of "kidney trouble." Mother died at 80 years of "cancer of the stomach." One brother died of heat exhaustion, one brother died of throat trouble. Four sisters are dead, one during "change of life," two of old age and one of "locked bowels." Patient was married at twenty-six years of age. Wife is living and well. Wife has had no miscarriages. Three children are living and well. One child died at thirty years of age of "tuberculosis."

P. H. Patient was born December 31, 1853, in Indiana. Has lived in Missouri the last twenty-six years. Had the usual diseases of childhood with no complications. Had "gonorrhea" when a boy. Received an injury to the right eye by being shot with a gun. Vision in this eye since then has been im-

paired. Had "chills and sweats" when twenty years of age. The remainder of the patient's past history is negative.

P. I. According to the patient the onset of the present trouble began two years ago when he noticed a small pimple on the top of the penis. This "sore" soon began to discharge. Patient thought that it was a boil and treated it accordingly. No relief was obtained from his treatment. The sore continued to discharge but did not give any pain. The patient used turpentine on it continuously but the mass increased in size and finally the whole top became raw. Growth has continued since then until the whole penis is involved. Has had no urinary trouble until lately, except that the urine contained blood at times. Of late the patient has not been able to control his stream and the urine has passed from many openings. According to the patient, the mass has grown very rapidly in the last few months and now bleeds very easily. The chief complaint is that the mass has a very disagreeable odor and that it has "bugs" in it. The patient applied to the venereal clinic and was sent to the hospital for treatment.

Physical findings. The patient is 82 years old. He is able to walk but is somewhat feeble. He is somewhat deaf but otherwise is cooperative. T. P. R. is normal. Head, negative. Eyes. The right pupil is small and does not react to light and accommodation. Artificial traumatic coloboma present. E. O. M. normal in left eye. Nose negative. Mouth, ears, neck, negative. Chest symmetrical. Expansion is limited but is equal. The percussion note is hyperresonant throughout. Breath sounds are harsh. No rales. Heart OCD is somewhat enlarged. The P. M. I. is in the sixth intercostal space, mammary line. The heart sounds are faint. A slight irregularity is heard in the rhythm. Also a soft systolic mitral murmur. The blood pressure is 115-90. Abdomen. Bilateral inguinal hernia are present. The inguinal glands may be felt but they are not greatly enlarged.

Genitals. The entire penis is replaced by a mass the size of a small grapefruit. The mass is a granulating, edematous, cauliflower ulceration extending from the glands to within one inch of the pubis. The surface is dirty and necrotic, bleeds easily on being touched, but is not painful to the patient. The tumor mass is moist from the escaping urine and has a very repulsive odor. Upon urination the urine escapes from several openings without apparent pain or obstruction. Patient was seen about two months before being sent to the hospital. At this time the mass was perhaps a little larger. Upon questioning, the patient readily admitted that he had been amputating some of the nodules with a string. At the base of the nodule he would tie a string tight and leave it in place until the nodule fell off. In this way he had removed many of the small nodules. At this time one of these nodules was removed for diagnosis. The report was squamous celled carcinoma. Two months after first being seen the patient returned and asked for the treatment that he had at first refused. The genitalia otherwise were negative.

Operation. After examination amputation was decided upon only as a palliative measure. This was deemed necessary on account of the necrosis and odor. Ether was used. A circular incision was made at the base of the penis and the vessels were tied off. The urethra was sewed to the edges of the skin and the skin was closed above and below the urethra. A small catheter was inserted into the bladder. It was our intention on starting the operation to remove

also the inguinal glands. The patient, however, did not take the anesthetic well so this was abandoned. An attempt was made later to remove these glands under local anesthesia but the patient refused to submit to such an operation. The photograph gives a relative idea of the size of the tumor mass.

The aftercourse was uneventful. The patient left the hospital on the fourteenth day in good shape. When seen two months following the operation there was considerable scar tissue in the line of incision but no metastasis could be found. The patient had gained in weight and was feeling much better than when first seen. The inguinal glands had not changed much in size.

In the treatment of such cases it is desirable to institute treatment early. With early amputation and removal of the inguinal glands the prognosis is of course better. Hertzler³ mentions a case which was free from metastases six years after operation. In the latent cases any treatment is only palliative.

We are greatly indebted to Drs. Mitchell, Barnum and Bradford for their help and assistance in this case.

312½ South Ohio Avenue.

REFERENCES

1. Adami and McCrae, Text-Book of Pathology—Second Edition.
2. Hertzler, A. E., A Treatise on Tumors.
3. Hertzler, E. E., Clinical Surgery by Case Histories. Vol. II.

CONSTITUTION AND BY-LAWS of the MISSOURI STATE MEDICAL ASSOCIATION Adopted, 1903; Revised, 1925

CONSTITUTION

ARTICLE I.—NAME OF THE ASSOCIATION

The name and title of this organization shall be the Missouri State Medical Association.

ARTICLE II.—PURPOSES OF THE ASSOCIATION

The purposes of this Association shall be to federate and bring into one compact organization the entire medical profession of the State of Missouri, and to unite with similar Associations in other States to form the American Medical Association, with a view to the extension of medical knowledge, and to the advancement of medical science; to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interests; and to the enlightenment and direction of public opinion in regard to the great problems of State medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life.

ARTICLE III.—COMPONENT SOCIETIES

Component Societies shall consist of those county medical societies which hold charters from this Association.

ARTICLE IV.—COMPOSITION OF THE ASSOCIATION

SECTION 1. This Association shall consist of Members, Delegates and Guests.

SEC. 2. MEMBERS. The Members of this Association shall be such of the members of the component county medical societies as shall be approved by this Association.

SEC. 3. DELEGATES. Delegates shall be those members who are elected in accordance with this Constitution and By-Laws to represent their respective component societies in the House of Delegates of this Association.

SEC. 4. GUESTS. Any distinguished physician not a resident of this State may become a guest during any Annual Session, upon invitation of the officers of this Association, and shall be accorded the privilege of participating in all of the scientific work for that Session.

ARTICLE V.—HOUSE OF DELEGATES

The House of Delegates shall be the legislative and business body of the Association, and shall consist of (1) Delegates elected by the component county societies; (2) in the absence of a delegate, the president of a component county medical society and, in the absence of the president, the secretary of a component county medical society; and (3) *ex officio*, the officers of the Association as defined in this constitution.

ARTICLE VI.—SECTIONS AND DISTRICT SOCIETIES

The House of Delegates may provide for a division of the scientific work of the Association into appropriate Sections, and for the organization of such Councilor District Societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county societies.

ARTICLE VII.—SESSIONS AND MEETINGS

SECTION 1. The Association shall hold an Annual Session, during which there shall be held daily General Meetings, which shall be open to all registered members, delegates and guests.

SEC. 2. The time and place for holding each Annual Session shall be fixed by the House of Delegates.

ARTICLE VIII.—OFFICERS

SECTION 1. The officers of this Association shall be a President, five Vice Presidents, a Secretary, a Treasurer, and twenty-nine Councilors more or less, as shall be determined by the House of Delegates from time to time.

SEC. 2. The President and Vice Presidents shall be elected for a term of one year. The Secretary and the Treasurer shall be elected by the Council at its annual meeting and each shall hold his office for one year. The Councilors shall be elected for terms of three years each, being so divided that one-third of the number shall be elected each year. All these officers shall serve until their successors are elected and installed.

SEC. 3. The President, Vice President and Councilors shall be elected by the House of Delegates, but no delegate shall be eligible to any office named in the preceding section except that of Councilor, and no person shall be elected to any office who is not in attendance at that Annual Session and who has not been a member of the Association for the previous two years.

ARTICLE IX.—FUNDS AND EXPENSES

Funds for meeting the expenses of the Association

tion shall be arranged for by the House of Delegates by an equal per capita assessment upon each county society to be fixed by the House of Delegates, by voluntary contribution, and from the profits of its publications. Funds may be appropriated by the House of Delegates to defray the expenses of the Annual Sessions, for publications, and for such other purposes as will promote the welfare of the Association and profession.

ARTICLE X.—REFERENDUM

The General Meeting of the Association may, by a two-thirds vote, order a general referendum upon any question pending before the House of Delegates, and the House of Delegates may, by a similar vote of its own members, or after a like vote of the General Meeting, submit any such question to the membership of the Association for a final vote; and if the persons voting shall comprise a majority of all the members present, a majority of such vote shall determine the question, and be binding upon the House of Delegates.

ARTICLE XI.—THE SEAL

The Association shall have a common Seal, with power to break, change or renew the same at pleasure.

ARTICLE XII.—AMENDMENTS

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the Delegates registered at that Annual Session, provided that such amendment shall have been presented in open meeting at the previous Annual Session, and that it shall have been sent officially to each component county society at least two months before the session at which final action is to be taken.

BY-LAWS

CHAPTER I.—MEMBERSHIP

SECTION 1. All members of component societies shall be privileged to attend all meetings and take part in all of the proceedings of the Annual Sessions, and shall be eligible to any office within the gift of the Association.

SEC. 2. The name of a physician upon the properly certified roster of members, or list of delegates, of a component society which has paid its annual assessment, shall be *prima facie* evidence of his right to register at the Annual Session in the respective gift of the Association.

SEC. 3. No person who is under sentence of suspension or expulsion from any component society of this Association, or whose name has been dropped from its roll of members, shall be entitled to any of the rights or benefits of this Association, nor shall he be permitted to take any part in any of its proceedings until such time as he has been relieved of such disability.

SEC. 4. Membership in this Association shall continue only so long as the individual is a member of a component society. When the Secretary shall be officially informed by the Secretary of the component society through which a member holds membership in this Association that the member is not in good standing the Secretary shall remove the name of said member from the membership roll of the Missouri State Medical Association. A member of a component society who removes to and engages in the practice of medicine at a location in another county in which there is a component society shall forfeit his membership in this Association and the Sec-

retary shall remove his name from the roster of members of the Missouri State Medical Association unless within one year after such change of residence he become a member of the component society in the county to which he has moved.

SEC. 5. Each member in attendance at the Annual Session shall enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been verified by reference to the roster of his society, he shall receive a badge which shall be evidence of his right to all the privileges of membership at that session. No member or delegate shall take part in any of the proceedings of an Annual Session until he has complied with the provisions of this section.

CHAPTER II.—ANNUAL AND SPECIAL SESSIONS OF THE ASSOCIATION

SECTION 1. The Association shall hold an Annual Session at such time and place as has been fixed at the preceding Annual Session or as fixed by this Constitution and By-Laws.

SEC. 2. Special sessions of either the Association or of the House of Delegates shall be called by the President at his discretion or upon petition of twenty delegates.

CHAPTER III.—GENERAL MEETINGS

SECTION 1. The General Meetings shall include all registered members, delegates and guests, who shall have equal rights to participate in the proceedings and discussions and, except guests, to vote on pending questions. Each General Meeting shall be presided over by the President, or in his absence or disability, or by his request, by one of the Vice Presidents. Before it, at such time and place as may have been arranged, shall be delivered the annual address of the President, and the entire time of the session so far as may be shall be devoted to papers and discussions relating to scientific medicine.

SEC. 2. The General Meeting shall have authority to create committees or commissions for scientific investigations of special interest and importance to the profession and public, and to receive and dispose of reports of the same, but any expense in connection therewith must first be approved by the House of Delegates.

SEC. 3. Except by special vote, the order of exercises, papers and discussions as set forth in the official program shall be followed from day to day until it has been completed.

SEC. 4. No address or paper read before the Association, except that of the President, shall occupy more than twenty minutes in its delivery, and no member shall speak longer than five minutes, nor more than once on any subject.

SEC. 5. All papers read before the Association shall be its property. Each paper shall be deposited with the Secretary when read, and if this is not done it shall not be published.

CHAPTER IV.—HOUSE OF DELEGATES

SECTION 1. The House of Delegates shall meet annually at the time and place of the Annual Session of the Association, and shall so fix its hours of meeting as not to conflict with the first General Meeting of the Association, or with the meeting held for the address of the President and so as to give delegates an opportunity to attend the other scientific proceedings and discussions so far as is consistent with their duties. But, if the business interests of the Association and profession require, it

may meet in advance or remain in session after the final adjournment of the General Meeting.

SEC. 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every fifty members, and one for each major fraction thereof, but each county society holding a charter from this Association, which has made its annual report and paid its assessment as provided in this Constitution and By-Laws, shall be entitled to one delegate.

SEC. 3. If a component county medical society is without representation at the close of the roll call of the second meeting of any session of the House of Delegates then the members registered in attendance from that county may select from their number the number of delegates which such county is regularly entitled to elect. If but one member is registered from any county medical society he shall be seated in the House of Delegates as a representative of that county.

SEC. 4. A majority of the registered delegates present shall constitute a quorum, and all of the meetings of the House of Delegates shall be open to members of the Association.

SEC. 5. It shall, through its officers, council and otherwise, give diligent attention to and foster the scientific work and spirit of the Association, and shall constantly study and strive to make each Annual Session a stepping-stone to future ones of higher interest.

SEC. 6. It shall consider and advise as to the material interests of the profession, and of the public in those important matters wherein it is dependent upon the profession, and shall use its influence to secure and enforce all proper medical and public health legislation, and to diffuse popular information in relation thereto.

SEC. 7. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist, and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality, and shall continue these efforts until every physician in every county of the State who can be made reputable has been brought under medical society influence.

SEC. 8. It shall encourage postgraduate and research work, and shall endeavor to have the results utilized and intelligently discussed in the county societies.

SEC. 9. It shall elect representatives to the House of Delegates of the American Medical Association, in accordance with the Constitution and By-Laws of that body.

SEC. 10. It shall upon application, provide and issue charters to county societies organized to conform to the spirit of this Constitution and By-Laws.

SEC. 11. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into societies to be designated by hyphenating the names of two or more counties so as to distinguish them from district and other classes of societies, and these societies, when organized and chartered, shall be entitled to all the privileges and representation provided herein for county societies, until such counties may be organized separately.

SEC. 12. It may divide the counties of the State into Councilor Districts.

SEC. 13. It shall have authority to appoint committees for special purposes from among members

of the Association who are not members of the House of Delegates, and such committees may report to the House of Delegates in person, and may participate in the debate thereon.

SEC. 14. It shall approve all memorials and resolutions issued in the name of the Association before they shall become effective.

SEC. 15. It shall present a summary of its proceedings to the last general meeting of each Annual Session, and shall publish the summary in the transactions.

CHAPTER V.—ELECTION OF OFFICERS

SECTION 1. All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect.

SEC. 2. The President, on the first day of the Annual Session, shall select a Committee on Nominations consisting of ten delegates, no two of whom shall be from the same councilor district. It shall be the duty of this committee to consult with the members of the Association and to hold one or more meetings at which the best interests of the Association and of the profession of the State for the ensuing year shall be carefully considered. The committee shall report the result of its deliberations to the House of Delegates in the shape of a ticket containing the name of one member for each of the offices to be filled by the House of Delegates at that Annual Session except that of President, who shall be nominated from the floor of the House of Delegates.

SEC. 3. The House of Delegates shall remain in continuous session on the first day of the Annual Session and complete the work coming before it at that session. It shall meet on the second day of the Annual Session to receive the report of the Nominating Committee and complete unfinished business. The election of officers shall be the first order of business after reading the minutes at this session. No new business shall be introduced at this session without the unanimous consent of the delegates.

SEC. 4. Nothing in this chapter shall be construed to prevent additional nominations being made by members of the House of Delegates.

CHAPTER VI.—DUTIES OF OFFICERS

SECTION 1. The President shall preside at all meetings of the Association and of the House of Delegates; shall appoint all committees not otherwise provided for; shall deliver an annual address at such time as may be arranged; shall give a deciding vote in case of a tie, and shall perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and, as far as practicable, shall visit, by appointment, the various sections of the State and assist the councilors in building up the county societies, and in making their work practical and useful.

SEC. 2. The Vice Presidents shall assist the President in the discharge of his duties. In the event of his death, resignation or removal, the Council shall select one of the Vice Presidents to succeed him.

SEC. 3. The Treasurer shall give bond for the trust reposed in him whenever the House of Delegates shall deem it requisite. He shall demand and receive all funds due the Association, together with the bequests and donations. He shall, under the direction of the House of Delegates, sell or lease any estate belonging to the Association, and execute the necessary papers; and shall, in general, sub-

ject to such direction, have the care and management of the fiscal affairs of the Association. He shall pay money out of the treasury only on a written order of the Chairman of the Council countersigned by the Secretary; he shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of his doings, and of the state of the funds in his hands. He shall charge upon his book the assessments against each component county society at the end of the fiscal year, which shall be December 31st; he shall collect and make proper credits for the same, and perform such other duties as may be assigned to him.

SEC. 4. The Secretary shall attend all meetings of the Association and of the House of Delegates, and he shall keep minutes of their respective proceedings in separate record books. He shall be custodian of all record books and papers belonging to the Association, except such as properly belong to the Treasurer, and shall keep account of and promptly turn over to the Treasurer all funds of the Association which come into his hands. He shall provide for the registration of the members and delegates at the Annual Session. He shall keep a card index register of all the legal practitioners of the State by counties, noting on each his status in relation to his county society, and upon request shall transmit a copy of this list to the American Medical Association for publication. In so far as it is in his power he shall use the printed matter, correspondence and influence of his office to aid the Councilors in the organization and improvement of the county societies, and in the extension of the power and usefulness of this Association. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall employ such assistants as may be ordered by the Council or the House of Delegates. He shall annually make a report of his doings to the House of Delegates.

In order that the Secretary may be enabled to give that amount of time to his duties which will permit of his becoming proficient, it is desirable that he should receive some compensation. The amount of his salary shall be fixed by the House of Delegates.

CHAPTER VII.—COUNCIL

SECTION 1. The Council shall hold meetings during the Annual Session of the Association, and at such other times as necessity may require, subject to the call of the Chairman or on petition of three Councilors. It shall hold at least one meeting during the Annual Session of the Association, after the newly elected Councilors have been announced by the House of Delegates, for reorganization and for outlining the work for the ensuing year. At this meeting it shall elect a Chairman and a Secretary and the latter shall keep a record of its proceedings. It shall, through its Chairman, make an annual report to the House of Delegates at such time as may be provided. It shall be the Executive Committee of the Association during the interval between meetings. Three members of the Council, elected by the Council, shall be the Executive Committee of the Council and shall constitute a quorum for the transaction of business excepting that concerning the conduct of a member, when a majority of the membership of the Council shall be necessary to act; provided, the action of the Executive Committee of the Council shall be subject to the approval of the Council.

SEC. 2. Each Councilor shall be organizer, peace-maker and censor for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exists, for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his doings, and of the condition of the profession of each county in his district to each annual session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of the duties herein imposed may be allowed by the House of Delegates upon a proper itemized statement, but this shall not be construed to include his expense in attending the Annual Session of the Association.

SEC. 3. Collectively the Council shall be the Board of Censors of the Association. It shall consider all questions involving the rights and standing of members, whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or of a county society, upon which an appeal is taken from the decision of an individual Councilor or component society. Its decision in all such cases shall be final.

SEC. 4. The Council shall provide and superintend the publication and distribution of all proceedings, transactions and memoirs of the Association, and shall have authority to appoint an editor and such assistants as it deems necessary. All moneys received by the Council, or its agents, resulting from the discharge of the duties assigned to them, must be paid to the Treasurer of the Association, and all orders on the Treasurer for disbursements of money in any way connected with the work of publication must be endorsed by the Chairman of the Council and countersigned by the Secretary of the Association. All matters of the Association pertaining to the expenditure of money for other purposes shall be referred, during the Annual Session, to the Council, who shall report upon the same within twelve hours, and if the House of Delegates orders the expenditure of money in connection with said report, the payment shall be made by the Treasurer as provided above. It shall be the further duty of the Council to hold the official bond of the Treasurer for the faithful execution of his office, annually to audit and to authenticate his accounts, and to present a statement of the same in its annual report to the House of Delegates, which report shall also specify the character and cost of all the publications of the Society during the year, and the amount of all other property belonging to the Association under its control, with such suggestions as it may deem necessary.

In the event of a vacancy in the office of the Secretary of the Association, or the Treasurer, the Chairman of the Council shall fill the vacancy *ad interim* until the next meeting of the Council.

SEC. 5. The Council shall have the right to communicate the views of the profession and of the Association in regard to health, sanitation and other important matters to the public and the lay press. Such communications shall be officially signed by the Chairman and Secretary of the Council, as such.

SEC. 6. The Council may upon request of a component society remit the state assessment of a member who has become totally and permanently incapacitated through mental or physical disability and has been a member in good standing during the

three consecutive years immediately preceding his disability; provided, that the component society shall remit the county society dues of such member.

CHAPTER VIII.—COMMITTEES

SECTION 1. The standing committees shall be as follows:

- A Committee on Scientific Work.
- A Committee on Health and Public Instruction.
- A Council on Medical Education.
- A Committee on Defense.
- A Committee on Nominations.
- A Committee on Arrangements.

And such other committees as may be necessary. Such committees shall be elected by the House of Delegates, unless otherwise provided.

SEC. 2. The Committee on Scientific Work shall consist of three members appointed by the President. One of these shall be the Secretary of the Association, and he shall act as the chairman of the committee. It shall determine the character and scope of the scientific proceedings of the Association for each session, subject to the instructions of the House of Delegates, or of the Association, or to the provisions of this Constitution and By-Laws. Thirty days previous to each Annual Session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented, which order shall be adhered to by the Association as nearly as practicable.

SEC. 3. The Committee on Health and Public Instruction shall consist of five members and the President and Secretary. The members of this committee shall serve for a period of three years. Under the direction of the House of Delegates it shall represent the Association in securing and enforcing legislation in the interest of the public health and of scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall utilize every organized influence of the profession to promote the general influence in local, State and National affairs and elections. Its work shall be done with the dignity becoming a great profession, and with that wisdom which will make effective its power and influence. It shall have authority to be heard before the entire Association upon questions of great concern, at such time as may be arranged during the Annual Session.

SEC. 4. The Council on Medical Education shall consist of three members, appointed by the President. One member shall be appointed to serve for three years, one for two years and one for one year; thereafter each year one member shall be appointed to serve for three years. The Council on Medical Education shall make (1) an annual report to the House of Delegates on the existing conditions of medical education in the state and in the United States; (2) make suggestions as to the means and methods by which the State Medical Association may best influence favorably medical education; and (3) act as the agent of the Missouri State Medical Association, under the instructions of the House of Delegates, in its efforts to elevate the standard of medical education.

SEC. 5. The Defense Committee shall consist of three members who shall, upon request and in compliance with the conditions hereinafter named, aid in the defense of suits for alleged malpractice instituted or threatened against any member of the Association.

CONDITIONS

- (a) Any member whose annual dues have been

received by the Secretary of the County Society on or before April 1 shall have the continuous protection provided for in this section. New members have a right to defense on receipt of their dues by the Secretary of the County Society.

(b) Any member whose annual dues have not been received on or before April 1 shall be delinquent from the first day of January of that year and shall remain so until his dues are paid. No member shall receive legal defense for any malpractice suit filed before the date of his enrollment as a member or during his delinquency; nor if the services for which malpractice is alleged were rendered wholly or in part before the date of his enrollment as a member or during his delinquency.

(c) Any member desiring to avail himself of the provisions of this section shall, within three days after any demand has been made upon him, present his request to the Secretary of this Association, together with a complete history of the case and the services therein rendered. The committee shall then, with the aid of its counsel, advise said member up to the time of the institution of suit. Should suit be filed, a copy of the plaintiff's petition must be immediately forwarded to the Secretary of this Association. The committee shall thereupon provide such medical expert and legal services of counsel as may be necessary, but in no case shall the cost to this Association be in excess of \$100 for all such services. The Association does not obligate itself to pay, nor shall it pay in whole or in part, any damages agreed upon in compromise, or awarded after trial, nor shall it pay any of the expenses incident to the taking of depositions nor any of the costs of court.

(d) No member shall be entitled to the above-described defense should the charge of malpractice be brought jointly against him and a hospital or sanatorium in which he is, or at the time of the alleged malpractice was, financially interested.

(e) Such aid as is specified in this section refers to civil malpractice only and is not to be construed to apply to criminal prosecutions.

SEC. 6. The Committee on Nominations shall be appointed and perform its duties in accordance with the provisions of Chapter V, Sections 2 and 3 of these By-Laws.

SEC. 7. The Committee of Arrangements shall consist of the component society in the territory in which the Annual Session is to be held. It shall, by committees of its own selection, provide suitable accommodations for the meeting places of the Association and of the House of Delegates and of their respective committees, and shall have general charge of all the arrangements. Its Chairman shall report an outline of the arrangements to the Secretary for publication in the program, and shall make additional announcements during the session as occasion may require.

CHAPTER IX.—ASSESSMENTS AND EXPENDITURES

SECTION 1. An assessment of eight dollars (\$8.00) per capita on the membership of the component societies is hereby made the annual dues of this Association, of which one dollar (\$1.00) shall be credited to subscription of *THE JOURNAL* for one year. The Secretary of each county society shall forward its assessment together with its roster of all officers and members, list of delegates, and list of non-affiliated physicians of the county, to the Secretary of this Association on or before December 31st in advance of each Annual Session.

SEC. 2. Any county society which fails to pay its assessment, or make the reports required, on

or before the date above stated, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association or the House of Delegates until such requirements have been met.

SEC. 3. All motions or resolutions appropriating money shall specify a definite amount, or so much thereof as may be necessary for the purpose indicated, and must be approved by the Council and House of Delegates on a call of the ayes and noes.

CHAPTER X.—RULES OF CONDUCT

SECTION 1. The Association recognizes and reiterates the principles laid down in the Principles of Medical Ethics of the American Medical Association.

SEC. 2. It is unprofessional for a physician to recognize or support in any manner any school of medicine, or any alleged method of treating disease or injury, based on exclusive dogma or sectarian system or professedly limited to the use of certain methods or designated by special titles or otherwise reputed in the profession as irregular. For a physician to consult with, exchange material benefits with, or to recommend or support a practitioner of any such system is unprofessional and constitutes gross misconduct.

CHAPTER XI.—RULES OF ORDER

The deliberations of this Association shall be governed by parliamentary usage as contained in Roberts' Rules of Order, unless otherwise determined by a vote of its respective bodies.

CHAPTER XII.—COUNTY SOCIETIES

SECTION 1. All county societies now in affiliation with this Association or those that may hereafter be organized in this State, which have adopted principles of organization not in conflict with this Constitution and By-Laws, shall, upon application to the Council, receive a charter from and become a component part of this Association.

SEC. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charters shall be issued thereto.

SEC. 3. Charters shall be issued only upon approval of the Council or House of Delegates, and shall be signed by the President and Secretary of this Association. The Council or House of Delegates shall have authority to revoke the charter of any component county society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

SEC. 4. Only one component medical society shall be chartered in any county. Where more than one county society exists, friendly overtures and concessions shall be made, with the aid of the Council or the District if necessary, and all of the members brought into one organization. In case of failure to unite, an appeal may be made to the Council, which shall decide what action shall be taken.

SEC. 5. Each county society shall judge of the qualifications of its own members but, as such societies are the only portals to this Association and to the American Medical Association, every reputable and legally registered physician who is a citizen of the United States and who does not support nor practice nor claim to practice sectarian medicine, who shall apply on the prescribed form and subscribe for THE JOURNAL, paying the dues for the current year, may be entitled to member-

ship. The provision requiring legal registration to practice medicine in Missouri shall not necessarily apply to graduates in medicine while engaged in teaching medicine in reputable medical schools. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

SEC. 6. A component society may at its discretion place active members who have reached advanced years and have long served the Association and profession, on an "Honor List" and such members shall be known as "Honor Members." They shall enjoy all the privileges of active membership and shall be exempt from dues.

SEC. 7. Any physician who may feel aggrieved by the action of the society of his county in refusing him membership, or in suspending or expelling him, shall have the right of appeal to the Council and to the House of Delegates.

SEC. 8. In hearing appeals the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a Board and as individual councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

SEC. 9. When a member in good standing in a component society moves to another county in this State, his name, upon request, shall be transferred without cost to the roster of the county society into whose jurisdiction he moves.

SEC. 10. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, on permission of the society in whose jurisdiction he resides.

SEC. 11. Each county society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county. No one shall become a member of any component county society, nor continue as such, who engages in contract practice with any lodge, society or individual, unless he shall receive for services rendered the regular fee, as per fee bill established by said society; provided that this shall not prohibit an agreement for a particular case nor apply to examinations for an adequate fee. No one shall become a member of any component county society, nor continue as such, who is guilty of soliciting patronage, or obtaining patients by a division of fees, or by other means of inducing physicians or other persons to bring patients to him for a consideration, for treatment or operation.

SEC. 12. Frequent meetings shall be encouraged, and the most attractive programs arranged that are possible. The younger members shall be especially encouraged to do postgraduate and original research work, and to give the society the first benefit of such labors. Official position and other preferences shall be unstintingly given to such members.

SEC. 13. At some meeting in advance of the Annual Session of this Association, each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Association, in the proportion of one delegate to each fifty (50) members, or major fraction thereof, and the Secretary of the society shall send a list of such delegates to the Secretary of this Association, at least ten days before the Annual Session.

SEC. 14. The Secretary of each county society

shall keep a roster of its members, and a list of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. He shall furnish an official report containing such information, upon blanks supplied him for the purpose, to the Secretary of this Association, on or before December 31st in advance of each Annual Session and at the same time that the dues accruing from the annual assessment are sent in. In keeping such roster the Secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

CHAPTER XIII.—ENTERTAINMENTS

No official entertainment shall be accepted by this Association during its Annual Session.

CHAPTER XIV. AMENDMENTS

These By-Laws may be amended at any Annual Session by a majority vote of all the delegates present at that Session, after the amendment has laid upon that table for one day.

Emergency clause provides for immediately going into effect after adoption.

A CLINICAL AND EXPERIMENTAL INVESTIGATION OF ARSPHENAMIN POISONING

Soma Weiss, New York (*Journal A. M. A.*, Feb. 21, 1925), publishes an analysis of accidents due to arspfenamin and records an attempt to approach one phase of the clinical problem with the help of animal experiments. The purpose of this study was to ascertain whether arspfenamin in massive therapeutic doses produces changes comparable to those of acute yellow atrophy of the liver in man and, if such changes are not produced, whether any predisposing condition could be induced experimentally which, together with arspfenamin, produces acute yellow atrophy of the liver in animals. The results of these experiments indicate that repeated doses of arspfenamin, corresponding to massive therapeutic doses, produce small areas of necrosis, fatty infiltration, congestion with round cell infiltration, and occasionally cloudy swelling in the liver cells, with the evidence of fatty degeneration in the tubules of the kidneys in some cases. The poisons produced no changes in the spleen. This tissue injury was not increased or modified when arspfenamin was combined with mercuric salicylate, in amounts corresponding to therapeutic doses in man. When the doses of arspfenamin mentioned were administered to cats in which liver injury had been produced by chloroform, the liver regenerated at the same rate as that in the series of cats which received chloroform alone. Arspfenamin, therefore, does not appear to increase the injury produced by chloroform. The histologic changes and the behavior of the poisoned animals do not correspond to those observed in acute yellow atrophy of the liver in man. The classification of the toxic reactions cannot be applied rigidly. Cases showing symptoms and signs characterized by skin reaction (dermatitis exfoliativa), and those with vasomotor reaction (edema), are relatively frequent. Twenty-nine deaths, at least, are attributed to arspfenamin. In twenty-one cases of the twenty-nine, death followed the injection of arspfenamin within a few hours. The liver showed no pathologic changes in seven-

teen cases in which necropsy was held. It is important, however, to emphasize the fact that every case of the group showed severe chronic lesions in other organs. Acute yellow atrophy of the liver, so called, followed the administration of arspfenamin in eight cases, but no predisposing factor was found on pathologic examination which explains the etiology of the disease. In additional cases, death was attributed clinically to arspfenamin, but the necropsy revealed some other cause. Toxicologic analyses were recorded in seventeen fatal cases following the administration of arspfenamin. It is concluded, on the basis of the study presented, that the majority of fatal accidents can be prevented by observing caution in individuals who show cardiovascular and renal disease, clinical evidence of status lymphaticus, or acute infectious disease (pneumonia). The fact that animals under the experimental condition described do not show acute yellow atrophy similar to that in man, and that in the fatal acute accidents in which repeated doses of arspfenamin had been given the liver did not show noticeable pathologic changes, suggests that therapeutic doses of arspfenamin do not produce noteworthy tissue damages in the liver. One cannot attribute acute yellow atrophy of the liver to a toxic effect of arspfenamin. However, as the relationship between the administration of arspfenamin and acute yellow atrophy is definite, the conclusion that arspfenamin plays an *indirect* role in causing acute yellow atrophy is inevitable. One cannot say with certainty whether this role lies in the precipitation of the condition in the presence of predisposing causes or in the efficient bactericidal action of arspfenamin, whereby a toxin is liberated. The fact that the same disease occurs in syphilis without arspfenamin suggests rather the second possibility.

FIVE SUCCESSIVE GENERATIONS OF WEBBED-FINGER DEFORMITY

The family reported on by Douglas P. Murphy, Rutherfordton, N. C. (*Journal A. M. A.*, Feb. 21, 1925), lived a very primitive existence in an isolated mountain community. Four of the members exhibiting the webbed-finger deformity were examined. Three of these four were members of three successive generations. The chief point of interest in the study of this family is the fact that the deformity is apparently never transmitted to any of the grandchildren when the parent is clear. This is true even though several preceding generations have been affected. This might possibly lend weight to the arguments against syphilitic infection as being a factor in causation.

HEMOCHROMATOSIS

The important clinical observations that permitted of the diagnosis of hemochromatosis during life, in the case cited by STUART WILSON and FRANK A. WEISER, Detroit (*Journal A. M. A.*, March 14, 1925), were: (1) the enlarged liver; (2) the diffuse pigmentation of the skin; (3) the demonstration of hemosiderin in the skin; (4) the demonstration of hemosiderin in the urine; (5) hyperglycemia; (6) glycosuria; (7) acidosis, and (8) cachexia.

CHRONIC LARYNGOTRACHEITIS FOLLOWING ROENTGENRAY THERAPY OF NECK

M. L. Harris, Brooklyn (*Journal A. M. A.*, April 25, 1925), reports a case of hyperthyroidism, treated with the roentgen rays. The hyperthyroid condition was improved, but the patient died from the destructive effects of the roentgen rays.

THE JOURNAL

OF THE

Missouri State Medical Association

DECEMBER, 1925

EDITORIALS

CONFERENCE OF STATE SECRETARIES AND EDITORS

Annually the American Medical Association invites the secretaries of constituent state medical associations and the editors of state medical journals to meet at Chicago for the purpose of discussing organization and medical problems. The conference this year was called on November 20 and 21.

One of the most important topics of discussion was periodic health examinations. Two sessions were devoted to this problem. The secretaries and editors were deeply interested and listened to the discussions with the view of promoting the adoption of the plans in their respective state associations as an organization movement.

All our members are more or less familiar with the plan of the commercial group of promoters of the periodic health examination who employ physicians to make the examinations, so-called, for a nominal fee while the corporation for whom the physician makes these examinations is getting a fat fee from the person examined. None of these commercial organizations can exist without the assistance of the physician who by this assistance is contributing to the commercialization of the practice of medicine.

If we read the signs aright, periodic health examination will become a routine in the life of every person who takes thought of his own welfare, and it is the physician who must make this examination. It is, therefore, the duty of every physician to familiarize himself with the development of this movement and prepare himself to perform this function as a part of his regular every day practice and not do it as a hired man for some commercial institution. Every county society should study this movement and plan to adopt it as a county society undertaking. The talks at the Chicago meeting, the demonstrations, the history forms and the pamphlets describing the work done in various sections of the country all combined to arouse interest in this method of keeping people well.

Another interesting topic discussed at the

meeting was the graduate extension work as a county society movement in cooperation with the state medical association. This sort of service is being offered to the members of several state associations and we hope it will be inaugurated in Missouri at an early date. By means of this movement the members in small communities can form groups to meet at certain intervals and receive instruction by lectures and demonstrations for a day or for several days in succession. The lectures can be divided so that the topics may be correlated and clinical demonstrations may supplement the didactic lectures.

Medical legislation came in for a very spirited discussion, the delegation from Illinois and other states describing the great value of lay cooperation. The medical profession always finds difficulty in presenting its arguments for or against bills affecting medical practice and public health because it seems to be difficult for the ordinary legislator to fix in his mind the thought that our sole object always is the protection of the public against imposters in medical practice. Even when the legislator does get this idea clearly he is apt to become fuddled and doubtful when the limited practitioners produce their subtle and plausible arguments that we are in reality endeavoring to monopolize the practice of medicine and control all methods of healing. To resist these assaults requires a mind capable of making its own analysis of questions and which is free from selfish motives and from control by outside influences. When our opposition to certain bills in the legislature is approved and fortified by the opinions of lay persons of standing and influence in their communities it is not so difficult for the legislator to conclude that the organized medical profession is honestly seeking to accomplish one aim and that is the protection of the people. So at this meeting the representatives from Illinois, Maine, New York, California and other states described the cooperative influence of these lay bodies in promoting good health laws and defeating bad bills.

The conference discussed many other topics of interest to the members in the regular work of county, state and national medical organization and the cooperation between county and state societies and the American Medical Association.

THE NEW MADRID COUNTY HEALTH UNIT

AN INCENTIVE FOR FURTHER LABORS IN THE FIELD OF COUNTY HEALTH UNITS

Any group striving towards the establishment and maintaining of a county health unit, would do well to read the article on the New

Madrid County Health Unit,¹ as written by Judge Caverno, of Canalou, Missouri, the Presiding Judge of the New Madrid County Court when the Unit was organized. In the words of Judge Caverno, "Our inventory at birth included a doctor, a nurse, a small incidental fund, an office in the court house, a strictly rural county with a few towns on its margin having no common interests and separated by great areas of newly reclaimed swamp land, a system of soft roads (many of them impassable during the greater part of the year), a foreign population largely recruited from the loggers who came to reclaim the land, 'shacks' the rule and houses the exception, sanitation an unknown word and 85 per cent. of the inhabitants tenant farmers."

This indeed was a rather gloomy outlook, but by coordinated work and logical conclusions the results attained with this material have been, to say the least, a revelation.

In adopting a motto or a slogan the Court came to the conclusion that to start with the ideal of "A sound mind in a sound body for everyone" was a little too much of an undertaking. Reasoning that they could reach all the schools but not all the homes, and that through the school children they could establish contact with the homes, and because the children were too helpless to help themselves and because the enormous sums spent for education are largely wasted through the lack of sound bodies and brains to put sound minds into, they adopted the following slogan: "Sound bodies for the school children for the school teacher to put sound minds into." With this slogan they started a routine system of physical examination, weighing and measuring, score cards with blue stars and gold stars, but soon ran against what were apparently insurmountable difficulties, in that the defects were so numerous and of such serious character that they were beyond the reach of the home pocket-book and beyond the facilities for practice in their neighborhood, New Madrid County having no hospitals and no surgeons.

Undaunted by these obstacles, the Court immediately converted two extra rooms on the top floor of the court house into a hospital, and with the aid of Dr. W. N. O'Bannon and the cooperation of those interested, there was soon a white enameled operating room and thirty beds distributed between two airy wards, all very professional in appearance and arranged so that efficiency in working was not impaired. Doctor W. E. Yount, of Cape Girardeau, volunteered as surgeon and the first clinic was held. Poor people and those not so poor were referred by the local physicians. At this clinic there were twenty-eight operations and many more needing operations which could not be taken care of at that time. In order to

have the complete cooperation of the medical profession of the county, the Court appeared before the County Medical Society and placed the problem before them in substantially this way:

"The first line of offense and defense in the battle for the public health is the private practitioner. Anything that makes New Madrid County a poor field for good doctors is the most direct blow possible at the public health, but a doctor ex-officio holds a position of public responsibility. If the private practitioner is ever superseded or has his practice cut into by a public practitioner, it will be because the physician fails to realize this responsibility and act on it.

"The best field for a physician is where people are well, not where they are sick. A high standard of health and high earning capacity promoted by the public health work are an asset, not a liability to the local doctors.

"A child needing medical or surgical treatment but unable to pay for it is not an asset to a doctor but is a liability to the county. It is inhuman that such a child should suffer or be deprived of the opportunity for health and happiness because of a theoretical line between private practice and public responsibility. We want you to go one step further. You will find cases in which the child needs help and the parents will not pay for it, even though they are able. In such cases we ask you to be guided by the needs of the child rather than the fault of the parents.

"Now, gentlemen, the question arises, who should make the decisions as to where this line runs? We have decided that you should. We ask you to become the staff of the New Madrid County Health Unit and Hospital and take the responsibility of drawing this line between private practice and public responsibility."

They found this arrangement to work well for all concerned. Since the beginning of the clinics, there have been 184 operations, all very successful. The survey of school children showed numerous sore eyes, and with the assistance of Dr. Robert Sorey, of the U. S. Public Health Service, there have been registered 587 cases, 64 of trachoma and 40 operative cases.

Through the efforts of the Health Unit the epidemics, such as diphtheria, typhoid fever, smallpox and other infections, have been held to a minimum. They have done much with little and raised the health standard of New Madrid County to such a degree that they are entitled to generous support. They have the satisfaction of knowing that they have done a hard job well.

1. History of the New Madrid County Health Unit, page 464 this issue.

THE ADCOX CONFESSIONS

Since many of our members may not have seen the "Confessions of Dr. Robert Adcox," published in the *St. Louis Star* and the *Kansas City Journal-Post* recently, we quote the résumé published in the *Journal of the American Medical Association*. The story ran in serial form and covered the period of Adcox's diploma mill activities. It is a sordid story of one man's greed for gold and his disregard of the lives and welfare of the public. Throughout his career as a "fixer" of credentials for persons who had no preliminary qualifications to study medicine Adcox says he realized that he was helping to grind out wholly incompetent persons to treat the sick and assisting in obtaining license for them to practice medicine. There are now thousands of such persons practicing with impunity because they have been licensed to do so. The résumé in the *Journal of the American Medical Association* follows:

In his confession published in the *St. Louis Star*, Dr. Robert Adcox says that Owen T. Owen, Chicago, could produce almost any needed educational "credentials." Owen, who it appears had been connected with "medical colleges" in Chicago and elsewhere, frequently quit these institutions, taking with him records, blank grade and attendance certificates and a bundle of blank diplomas. When Owen called on Adcox in St. Louis, he named two questionable Chicago medical schools and several others as institutions on which credentials would be issued, and arranged to charge \$50 for credits for the freshman year, \$75 for the sophomore year and \$100 for the junior and senior years; Adcox was to receive 50 per cent. Adcox relates that on the same day "a friendly medical student" brought a prospect to his home, for whom he secured from Owen a high school diploma and credentials showing attendance at a medical school in Chicago for two years, yet the man had never been in Chicago. "A great many" county superintendents of schools supplied Adcox with credentials. One superintendent brought his successor to Adcox and arranged to sell certificates issued on week days for \$10 and on Sundays for \$25. Adcox says he bought "a lot of stuff" from this man, who never asked to see a student. Dr. Ralph A. Voigt, who is said to have been indicted in January, 1924, for conspiracy against "public health and morals," came to Adcox with a note from Owen T. Owen to obtain a high school certificate. Voigt, Adcox says, had "credentials" showing that he had attended medical colleges in Chicago for a "couple" of years, which credentials looked like the handiwork of Owen. Adcox fixed up for Voigt, the high school certificate which is now in the files of the Missouri state board of health; Voigt obtained later one of the bogus Potosi High School diplomas and this, Adcox says, is now in the records of the Tennessee state board of health, where Voigt used it to obtain a Tennessee license; still another high school certificate obtained by Voigt, and equally worthless, is among the records of the Texas state board of health, where he obtained a license to practice. Adcox arranged with Voigt to obtain students who might need credentials or "persons who would like to become doctors," and then took Voigt to the "P. & S. College" where he enrolled as a student. Letters soon began

"pouring" into the college asking about requirements, tuition, and the standing of the school with certain boards of medical examiners. These letters were turned over to Adcox who wired each individual that he would call to see them within a few days. Adcox traveled, in looking up these persons, to New York, Philadelphia, Washington, Hartford, Richmond, Jacksonville, Birmingham, Memphis, New Orleans, Houston, Fort Worth, Dallas, Kansas City, Tulsa, Oklahoma City, Denver, Salt Lake City, Los Angeles, San Francisco, Omaha and "dozens of other cities." In most instances, he says he found that those who had written the college were uneducated men with some money who wanted a "short cut" to a medical degree. They had all learned this was possible through friends. Adcox personally guaranteed these prospects that for a sum of money they would receive a medical diploma. He took some of them back to St. Louis with him, and arranged for others to meet him there after he had prepared their high school certificates and credentials for the first two years in medical school. The books of the medical college were made to show, he says, that the young men had already put in two years. He has heard, he says, groups of students in the corridors discussing things which happened at the college the year before when as a matter of fact not one of them had been there the previous year. It now became necessary for Adcox to make new alliances as there was a demand for credentials of every kind. About this time Frank J. Kenney, alias T. J. Kenney, who was just out of prison, put in his appearance.

KOCH HOSPITAL FOR TUBERCULOUS PATIENTS

Koch Hospital, the municipal institution operated by the City of St. Louis for the care and treatment of tuberculous patients, is one of the best conducted institutions of its kind in the country. For a number of years, the facilities were limited and the buildings and equipment of such character that competent men were not attracted to the institution. All this has been corrected and now the institution is not only well equipped but has modern buildings and thoroughly competent persons employed to minister to the needs of the tuberculous. New buildings were added to the group on October 15, when two structures, one for men and women employees' living quarters and recreation hall, and one for the men's infirmary, were dedicated and will soon be open for use. The total cost of the two new buildings is \$543,000, this sum being provided out of the \$87,000,000 bond issue authorized some time ago.

The main infirmary building has accommodations to care for 165 patients, giving the hospital a total capacity of 475. The dedication of the employees' dormitories, one for the men and one for the women, and the recreational building for employees, together with a new kitchen and a new dining room for the physicians and the nurses, which were completed recently, will go far toward solving the problem of efficient nurses and attendants.

This problem has been an acute one at Koch Hospital which is situated on the Mississippi River about fifteen miles from St. Louis, making it difficult for the employees to find diversion and recreation when such facilities are not provided at the institution.

The medical and nursing staffs have been increased, and the hospital will meet all the requirements of a class A sanatorium. The staff is composed of 1 superintendent, 1 chief resident physician, 5 resident physicians, 2 interns, 1 X-ray technician, 1 laboratory technician, 1 tuberculosis controller who is medical director of the institution, 19 graduate nurses and 46 practical nurses.

For a number of years, Dr. H. I. Spector was superintendent of Koch Hospital but has been appointed tuberculosis controller for St. Louis, and Dr. J. J. Singer has been appointed superintendent. Good results in the treatment of the patients at Koch Hospital have steadily increased under the efficient administration of Dr. Spector and Dr. Singer and the improved facilities, so that at present the records show that an average of eighteen patients are returned to their homes every six months with the disease in an arrested condition. With good care and intelligent observation, most of these cases undoubtedly will continue in good health.

NEWS NOTES

Dr. Robert E. Graul, St. Louis, has moved his office from Grand and Arsenal Sts., to Grand and Sidney Sts.

An ordinance has been introduced in the Board of Aldermen of St. Louis to condemn two square blocks of ground adjacent to the City Hospital in order to provide room for extension of the hospital facilities.

Dr. Lindsay S. Milne and Miss Marian Young, both of Kansas City, will be married on December 15, in the Second Presbyterian Church in that city. Drs. Sam Roberts, J. Milton Singleton, Charles C. Denine and Rex Diveley will serve as groomsmen.

An examination was held by the American Board of Otolaryngology on October 19, at the Cook County Hospital, Chicago, with the following result: Passed, 120, failed, 23, total examined, 143. The next examination will be held in Dallas, Texas, on April 19, 1926. Applications may be secured from the Secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis.

A campaign has been started by Rush Medi-

cal College alumni to raise a fund of \$250,000 as a contribution from the alumni toward the general development funds of the University of Chicago, of which Rush Medical College is now an integral part. Dr. Ralph W. Webster, of Chicago, is in charge of the committee of physicians which will be nation-wide in its personnel.

The St. Louis City Sanitarium has openings for several interns, the position paying \$85.00 per month with full maintenance. The City Sanitarium is the hospital for the care of the insane maintained by the City of St. Louis. Physicians who may wish to make application for internship are invited to address Dr. W. A. Rohlfing, Acting Hospital Commissioner, Municipal Courts Bldg., St. Louis.

Beginning with this issue, THE JOURNAL has the privilege of publishing the proceedings of the Kansas City Academy of Medicine. For some time, the Academy has contemplated inaugurating a column in our JOURNAL for their proceedings, but until now it has not been feasible to prepare the abstracts and discussions of the papers read at the meetings. We are sure our members will be much interested in reading the proceedings of the Academy.

J. L. Bruce and R. A. Short, both chiropractors at Cape Girardeau, were found guilty of practicing medicine without a license by juries in circuit court of that district, on October 27. Bruce was fined \$500 and Short was fined \$375.

W. O. Swofford, Cape Girardeau, was fined \$50 when he pleaded guilty to a similar charge. He told the court he had left Cape Girardeau and had quit practicing chiropractics.

Dr. Jabez North Jackson and Mrs. Florence Hinkle Storey, both of Kansas City, were married Wednesday afternoon, October 28, in the Country Club Christian Church in Kansas City. Immediately after the ceremony they departed on their honeymoon and upon their return will be at home with Mr. and Mrs. Thomas G. McLaughlin, Kansas City. Mrs. McLaughlin is a daughter of Dr. Jackson and is the mother of his first grandchild, born recently.

The National Board of Medical Examiners has announced that two additional states, Connecticut and Utah, have notified the Board that they will accept the Board's certificates as qualifying physicians to practice medicine in those states. These certificates are now recognized in more than thirty states and also in Great Britain. At the June examinations held by the Board a total of 508 were examined, this

being the largest number ever to take the written examination. Examinations were held in thirty medical schools throughout the country, including Washington University. Of those who took the examination in June, LeRoy Goodman, of Kansas City, a student at Harvard University Medical School, made a grade of 383.5, making him third highest of the class examined. Herman E. Pearse, Jr., of Kansas City, also a student at Harvard University Medical School, was fifth in the class taking the Part II examination which covers the third and fourth years in medicine, making a grade of 200.2. There were 174 candidates in the Part II examination.

At the graduation exercises of the Medical Field Service School, Carlisle Barracks, Pa., October 13, for the class of officers of the Medical Department, National Guard and Reserve, diplomas were awarded to twenty-two officers who completed the course. Among these were Capt. William H. Thaler, St. Louis, M. C. Missouri National Guard and Major David E. Smallhorst, El Paso, Tex. Dr. Smallhorst formerly practiced in St. Louis where he has many friends among the members of the St. Louis Medical Society.

The new building of the Christian Hospital, St. Louis, was open for the reception of patients, October 30. The hospital contains 124 rooms for private patients, including 90 double rooms and a few en suite with private bath. In addition to these rooms, there are 2 wards, making a total capacity of 140 beds. Three operating rooms provide ample accommodations for surgical work; two of them located on the fourth floor, the third on the ground floor for emergency cases. A special coloring scheme has been adopted in the operating rooms and throughout the building, to make the interior harmonious in decorations and furnishings. The X-ray and other laboratories are completely equipped with every modern appliance. The obstetrical division is provided with every convenience for the proper care of the mother and child. Five acres of land surround the hospital building upon which new buildings can be erected as the needs of the institution grow. The present structure was erected at a cost of about \$400,000.

At the regular meeting of the Council of the Chicago Medical Society held November 10, the following resolutions were adopted:

WHEREAS, The American Public Health Association at its Annual Meeting in St. Louis, in October, 1925, listened to an address by one of its members, favoring a new doctor in each community where a Health Officer is needed, to be known as a Doctor of Public Health, and

WHEREAS, Several institutions of learning have introduced courses in Public Health whereby a layman as well as a physician, may be instructed and in a comparatively short time qualify as a Doctor of Public Health, (D.P.H.) and be allowed to advise, qualify and practice preventive medicine, and

WHEREAS, In all probability a bill to license a so-called D.P.H., will be introduced into the next session of the state legislature of Illinois, and

WHEREAS, The Chicago Medical Society believes that all health officials should first be physicians (M.D.) who have the proper knowledge of the sciences concerned in public health, and that such knowledge cannot be gained by any layman in two or three years, and

WHEREAS, Such an arrangement of a layman being a health official, places a double expense on the community, since it is necessary for the community to then procure the service of an M.D., in addition to a layman, and

WHEREAS, The state confers on an M.D. the right to practice medicine and surgery in all its branches, while the special licensing of a D.P.H. would be special legislation tending to take from an M.D. that right, therefore be it

Resolved, That the Chicago Medical Society believes all positions of trust pertaining to public health in any community should be held by physicians, (M.D.) and not by laymen holding D.P.H. licenses, and be it further

Resolved, That the Chicago Medical Society views with displeasure any move on the part of the American Public Health Association, which may express a desire to replace physicians as health officials by laymen with D.P.H. licenses, and be it further

Resolved, That a copy of this resolution be sent to the American Public Health Association; to all those institutions of learning where courses in public health are given with a view to conferring a D.P.H. degree; and to every state medical society with a request that their component county societies be made acquainted with the proposed activities of a public health association, whose president is a layman.

OBITUARY

HOMER H. PRATT, M.D.

The death of Dr. Homer H. Pratt, Brookfield, October 15, is a loss to the medical profession of Missouri of one of its long time members. Dr. Pratt was a graduate of Rush Medical College in 1872. He was a Fellow of the American Medical Association and had been a member of the Missouri State Medical Association since the early days of its organization. He was a member of the Linn County Medical Society.

DAVID EMORY SHY, M.D.

Dr. David Emory Shy, aged 45 years, died at the Missouri, Kansas, Texas Railway Hospital, Sedalia, Missouri, November 5, 1925. Death was due to endocarditis, complicating influenza and pneumonia.

Dr. Shy was a graduate of the Medical Department of the University of Kansas, 1907.

Following his graduation, he practiced for some years at Knobnoster, Missouri. In 1917 he moved to Sedalia and became house surgeon at the Missouri, Kansas, Texas Railway Hospital. His illness came on following a visit to Kansas City to attend the Fall Clinics. It was his yearly custom to attend the Clinics and meet and mingle with his old classmates and friends.

Dr. Shy was President of the Pettis County Medical Society at the time of his death and was perhaps one of the most ardent and faithful workers that the Society has; a friend to all and one greatly loved and respected by those he came in contact with.

ALFORD T. CHATHAM, M.D.

Dr. Alford T. Chatham, Clarkton, a graduate of the Hospital Medical College of Evansville, Ind., 1884, died in October, 1925, aged 77 years. Dr. Chatham had been active in civic affairs at Clarkton and had long been a member of the Dunklin County Medical Society.

EMMETT STARKE BALLARD, M.D.

Dr. Emmett S. Ballard, St. Joseph, graduate of Bellevue Hospital Medical College, 1898, died September 24, 1925, after a prolonged illness. Dr. Ballard was a member of the Board of Education of St. Joseph in 1919 and served his county medical society as its vice president in 1922. He had been a member of the Buchanan County Medical Society for many years.

BOOKS FOR LEISURE MOMENTS

When Charles Major gives us a book, it is sure to be a romance with a colorful historical setting. He has not disappointed us in "Rosalie." (Macmillan Company, New York.)

The hero of the story is a Doctor Collingwood, who incurs the dislike of his fellow physicians of England because he advocates the theories of Hahnemann. He at last comes into disfavor with the royal court of George IV and was finally sentenced to be hanged because of the death of a child whom he was treating. A beautiful Canadian girl, Rosalie, saves him. They sail on the ship Fontenac, which is finally wrecked off the coast of Labrador. They are then saved by a young Frenchman, Gabriel, who falls in love with Rosalie. Gabriel takes them to the Mission of Father Ignace where they remain all winter. Gabriel's love for Rosalie causes him to betray Dr. Collingwood. In the end the Doctor and Rosalie are married after the real mur-

derer of the child has been apprehended and all ends well.

The introduction to the story is the best part of the book, because it gives us a clear picture of England in the reign of George IV and makes one wonder why anyone would care to be a physician in England during that period. If your patient died, it was only by chance that you escaped being held responsible for the death, and if your patient was of the royal blood, suicide seemed to be the only road open to you after the royal patient's demise. The romance in the story is prettily told and the characters are clearly drawn. Life at the Canadian Mission is well brought out and the good work of the priests with the Indians in this far north country is interesting reading.

"Rosalie" may not be classed with "Dorothy Vernon of Haddon Hall" (Mr. Major's most popular book) but it will hold its own with the present day publications both because it is entertaining and because it gives interesting sidelights on some history with which many are not familiar. P. B.

Each December booksellers tell us the story of the actress who couldn't think of a Christmas present for her friend. The genial clerk suggested a book and the actress said:

"Oh, she has a book."

This Christmas time one has a great variety of books from which to choose. The publishers seem to vie with each other in trying to put forth the greatest number of books on the greatest number of topics. For timeliness and topical interest we have "Winged Defense," by Col. William Mitchell, brought out by G. P. Putnam's Sons. As the best seller we have A. S. M. Hutchinson's "One Increasing Purpose," published by Little Brown & Company. A close second and a runner up to Mr. Hutchinson is "The Perennial Bachelor," by Anne Parish, which won the \$2,000 prize offered by the publishers, Harper and Brothers. Speaking of prizes, we have Dodd Mead & Company's prize book "Wild Geese," by Martha Ostenso. This author received the \$13,500 prize for this unusual story of a remote farming country.

In the biography list we find Ida M. Tarbell's "The Life of Judge Gary—The Story of Steel" which is published by D. Appleton & Company. "The Life of William Jennings Bryan," by Genevieve Forbes Herrick and John O. Herrick, is brought out by Stanton. William Allen White is seemingly adept at writing biographies of presidents. This year he is out with "Calvin Coolidge, the Man Who Is President," published by Macmillan Company.

It is not everyone who can read Sherwood

Anderson, but in his new book, "Dark Laugh-ter," published by Boni & Liveright, one feels that his audience will be widened. Another author on this scale is Willa Cather who has a new book, "The Professor's House," which upholds her reputation as a peerless novelist. This is an Alfred A. Knopf publication. And for these readers comes H. G. Wells with "Christina Alberta's Father," published by Macmillan Company. In this book Mr. Wells discusses the new woman as he sees her.

For poetry, the two outstanding books of poems come from the pen of writers who died too soon. "What's O'Clock," by Amy Lowell (Houghton Mifflin Company) and "The Complete Poems of Emily Dickinson," published by Little Brown and Company.

A nice group of books we have this holiday season, a group of books with enough zest and interest to please the most critical and enough variety to please our friend even though she has a book.

P. B.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, FOR 1925

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID THE STATE ASSESSMENT FOR ALL
THEIR MEMBERS)

- Benton County Medical Society, October 10, 1924.
- Chariton County Medical Society, December 20, 1924.
- Camden County Medical Society, December 29, 1924.
- Madison County Medical Society, January 21, 1925.
- Montgomery County Medical Society, January 22, 1925.
- Clark County Medical Society, January 30, 1925.
- Cape Girardeau County Medical Society, February 10, 1925.
- Dent County Medical Society, February 19, 1925.
- Webster County Medical Society, February 26, 1925.
- Ste. Genevieve County Medical Society, March 24, 1925.
- Ralls County Medical Society, April 2, 1925.
- Caldwell County Medical Society, April 4, 1925.
- Taney County Medical Society, April 6, 1925.
- Christian County Medical Society, April 15, 1925.
- Monroe County Medical Society, April 20, 1925.
- Cooper County Medical Society, April 28, 1925.
- Morgan County Medical Society, May 7, 1925.
- Laclede County Medical Society, May 29, 1925.
- Scott County Medical Society, June 20, 1925.
- DeKalb County Medical Society, July 21, 1925.
- Carter-Shannon County Medical Society, August 24, 1925.
- Ray County Medical Society, August 28, 1925.
- Platte County Medical Society, September 21, 1925.

Saline County Medical Society, October 15, 1925.

Crawford County Medical Society, October 16, 1925.

Reynolds County Medical Society, November 14, 1925.

KANSAS CITY ACADEMY OF MEDICINE

President, Dr. Ralph H. Major

Secretary, Dr. Frank R. Teachenor

Meets Third Friday Every Month Except June, July, August at General Hospital

Meeting of October 16, 1925

A CASE OF MYELOGENOUS LEUKEMIA.—By DR. W. A. MYERS.

The patient is a white woman, aged 37 years. She has had four children and three miscarriages. She has not felt well for several weeks but has no very definite symptoms except general weakness. She came to the hospital a few days ago and on examination a large mass was found in the left upper quadrant. The blood examination showed R.B.C. 3,600,000, W.B.C. 278,000 and hemoglobin 65 per cent. The differential count showed 35 per cent. myelocytes.

This is a typical case of myelogenous leukemia, which is not a rare disease but is an uncommon one. Osler states that in the Johns Hopkins Hospital there were only twenty-four cases in eighteen years. The interesting thing about this patient is, not that she has a myelogenous leukemia, but that she has a myelogenous leukemia associated with syphilis. This patient has a four plus Wassermann. I have not found a single report in the literature associating lues with leukemia.

DISCUSSION

DR. FRANK C. NEFF: I should like to ask Dr. Myers about the advisability of splenectomy in this patient.

DR. MYERS: I would hardly expect that treatment to be successful here. At any rate we first are going to place the patient on antiluetic treatment.

RESECTION OF STOMACH FOR CARCINOMA.—By DR. C. C. NESSELRODE.

This patient was first seen two years ago. He is fifty-five years of age. He had been losing weight for three months. Two and one-half weeks before the time he was first seen he began to vomit constantly. He lost twenty pounds in weight and was very weak. The gastric analysis showed no free hydrochloric acid. The radiograph findings showed a definite pyloric obstruction. One-half of the stomach was occupied by a filling defect.

The patient was operated upon, the pyloric end of the stomach resected and a gastrojejunostomy was performed. He had a perfectly uneventful convalescence. It is now two years since he was operated upon. He is working every day and appears perfectly well. The specimen was examined by Dr. H. R. Wahl, who made a diagnosis of carcinoma of the stomach on the base of an old ulcer.

The other specimen was brought in order to contrast with that of the previous patient. This specimen is from the stomach of a man who was diagnosed ulcer of the stomach and given medical treatment for a long time although he had definite and marked pyloric obstruction. At the time I saw him

he had been in bed for three months and a large mass was palpable in the abdomen. The patient was operated upon and did very well for some time but ten months later returned with definite evidence of a recurrence of growth. This patient was away from his work only seven weeks and since his return has not lost a day.

Contrast this with the three months period which the owner of the other specimen spent in bed before operation. It was not alone the three months time that he lost at that time, but with it he lost the only opportunity he had for a complete removal of his malignancy. Our object in presenting these cases with these two specimens is to call attention again to the ever present danger of malignancy in the stomach of a patient past forty-five with the history and findings of an ulcer.

DISCUSSION

DR. P. J. OWENS: I should like to ask Dr. Nesselrode if there was a history of ulcer preceding this trouble.

DR. NESSELRODE: There was a definite history of attacks of indigestion. He complained of sour stomach and belching of gas. These attacks lasted for a period of only a week or two and then recurred occasionally at intervals of from one to two months. Such a history can, of course, be interpreted as an ulcer history.

DR. H. R. WAHL: This is a typical example of a carcinoma developing on the base of an ulcer. The association, however, is probably not so good as is often maintained. It is interesting to note that most cancers of the stomach are inside of the pyloric ring while most ulcers are outside of the ring in the duodenum.

A CASE OF XERODERMA PIGMENTOSA (Kaposi Disease Angioma Pigmentosa Atrophicum).—By DR. H. M. GILKEY.

This is a rare affection which develops in early life (first or second year) as a freckle-like pigmentation. The pigment spots are seen first upon the exposed parts, namely, the hands and face, and generally in summer. Later they appear upon the neck, the upper part of the chest, the hands and forearms, and in some cases on the legs below the knees.

After one or two summers the freckles cease to fade in winter. Telangiectases and small angiomas appear. Also smooth white spots of atrophic skin. In the course of time the pigmented areas and the white spots enlarge and blend. Ectropion may be produced by contraction of the scar tissue. Then there appear small superficial crusted ulcerations and small wart-like growths among the pigment spots and eventually the sores and warts give rise to malignant fungating growths of a carcinomatous nature.

According to Kaposi the pathologic process in xeroderma pigmentosa begins with the proliferation of connective tissue of the papillae and endarteritis. This results in retraction of the papillae, obliteration of some of the capillaries and compensatory dilatation of others.

The cause of this remarkable disease is unknown. It shows a strong familial tendency, though confined to one generation. Sunlight is regarded as a probable exciting cause. There is a close resemblance, both clinically and histologically, between this affection, senile degeneration of the skin and X-ray dermatitis.

In the earliest stages the skin should be protected from light by means of grease paint colored with burnt umber or by a brown veil. Some tumors or ulcers should be excised. X-ray applications in properly measured doses may be employed for removal of warts and for healing ulcer.

This patient is a fairly well developed and nourished girl, four years of age. She has freckles and pigmented areas, also areas of fungoid growth of exposed areas of body surface. Conjunctivae are markedly injected and photophobia is marked. These changes appeared first when she was exposed to the sun's rays when two years of age. No other members of this family show these lesions.

DISCUSSION

DR. PAUL F. STOOKEY: It is interesting to note that if most of these cases are kept away from the light they will improve. The exposed surface of the skin, in coming in contact with the light, is the first part to be inflamed.

HODGKIN'S DISEASE IN A FIVE-YEAR-OLD BOY.—By DR. FRANK C. NEFF.

This patient is of especial interest because of the rarity of Hodgkin's disease in childhood. The family history is negative. The boy began to have enlarged glands on one side of the neck in December, 1924. He received three treatments with Roentgen ray which gave prompt but transitory results. He came into the University of Kansas Out-Patient Department in September of this year, with enlarged glands on one side of the neck. Since that time they have been steadily enlarging. The glands are elastic, discreet and movable and not adhered to the skin. There is no dyspnea, difficult breathing nor fatigue.

The patient's appetite is good, no cachexia, weight, thirty-eight pounds and his weight is increasing. The spleen, liver and mesenteric glands cannot be felt. Mediastinal glands are enlarged as shown by the radiogram and by percussion.

The blood shows a simple secondary anemia. The R.B.C. was 4,000,000, W.B.C. 12,500 and hemoglobin 75 per cent.

A small gland was removed for examination and the pathological report gives a diagnosis of typical Hodgkin's disease.

Tuberculosis was excluded by a negative skin test and the absence of tubercles in the section of gland tissue. Treatment is unavailing. Roentgen therapy causes early a rapid but transient remission.

REDUCTION OF FRACTURE OF THE ZYGOMATIC BONE—DR. SAM E. ROBERTS.

I wish to report briefly on the case of a fractured zygomatic (or malar) bone, using a corkscrew to elevate the depression. The patient was a boy of 16 years of age who, while playing foot-ball, was hit in the face. This produced a complete depression of the zygomatic bone, with a fracture into the orbit at the maxillary and frontal suture line. The eye was unaffected except a subconjunctival hemorrhage. The face has a flat appearance on the affected side and the orbital involvement could be distinctly palpated.

The boy was given a general anesthetic and a stab made in the region of the malar canal. An ordinary corkscrew was forced through the bone, a pull made and the fracture reduced. This was done about four weeks ago and all the deformity was corrected. The operation was performed twelve hours after the accident.

I do not know whether this method would work satisfactorily in older fractures. I might conclude by saying that I had great difficulty in purchasing this unusual surgical instrument. I finally succeeded in finding one at a second hand store.

BATES COUNTY MEDICAL SOCIETY**October Meeting**

The Bates County Medical Society held its regular monthly meeting in Butler, October 29, at 1:30 p. m. There were present Drs. Robinson, of Adrian, Insley, of Rich Hill, Chastain, Crabtree, and Thiele, of Butler.

The first paper on the program was one by Dr. Edw. E. Robinson, of Adrian, his subject being, "X-Ray as a Therapeutic Agent in the Treatment of Diseased Tonsils." Doctor Robinson's paper was based on about twenty-five cases so treated. His conclusions were well and fairly drawn and his paper a very valuable one to the members of the society. He cited case after case which unquestionably proved the value of X-ray in the treatment of focal infection in the tonsils and mentioned several cases in which no apparent benefit was derived from the procedure.

The next paper on the program was one by Dr. Herbert W. Insley, of Rich Hill, on "Office Procedures to Combat Quackery." Dr. Insley's paper was excellent and provoked enthusiastic and favorable criticism. The discussion was very interesting and the speakers concurred with the sentiment expressed in Doctor Insley's paper.

Dr. E. N. Chastain made a motion that a committee of three be appointed to take up the matter of advertising by the county society in the local papers. The purpose of these advertisements is to combat the propaganda of the various cultists in our midst. Drs. Insley, Robinson and Thiele were appointed on the propaganda committee.

Those present concurred in the opinion that Dr. Insley's paper should appear in the State Journal and he was asked to prepare his paper for publication. The members also were unanimous in the opinion that papers by our own members were particularly valuable to our society since the problems of one are the problems common to all.

No further business appearing the meeting adjourned.

GEORGE H. THIELE, M.D., Secretary.

CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society held its Hal-low'e'en meeting in Excelsior Springs, Thursday evening, October 29, beginning with a six o'clock dinner at the famous Snapp Hotel. Exactly thirty-two members, wives and guests were seated at the sumptuous repast and did it ample justice. The Excelsior Springs members of the society entertained the gathering.

After dinner, the Ladies' Auxiliary repaired to the hotel parlors for an interesting meeting. The scientific session held in the dining-room was of profound interest and provoked much of valuable discussion.

The address of the evening was given by Dr. A. B. Jones, of Kansas City, on the "Treatment of Lobar Pneumonia." Dr. Jones handled his subject in the happy way peculiar to himself and answered an avalanche of questions, chiefly in relation to the use of quinine dihydrobromid intravenously and intramuscularly in severe cases. The doctor reported numerous cases within his experience and observation which apparently justified some rather extravagant claims for the drug. Some of our members are going to give it a trial when opportunity offers. Dr. Jones' paper was much applauded and a vote of thanks followed.

At this meeting, Drs. Robert Crawford, Mark Rogers, J. H. Howell, A. R. Warner, T. R. Neil and

Col. Chambers, of the U. S. Veterans Hospital Staff were elected honorary members of the society.

Our interest has never been better.

J. J. GAINES, M.D., Secretary.

CRAWFORD COUNTY MEDICAL SOCIETY

The Crawford County Medical Society held its annual meeting at Cuba, on October 13. The minutes of the previous meeting were read and approved.

Dr. W. G. Henderson, Cuba, read a paper on "The Tongue." This was a very interesting presentation of Dr. Henderson's observations and conclusions. Several clinics were presented which added greatly to the interest of the meeting.

Dr. Henderson is permanently located at Cuba, his residence formerly being at Oak Hill.

At the election of officers Dr. G. G. A. Herzog, Cuba, was elected president and Dr. W. J. Parker, Steelville, was reelected secretary.

The constitution and by-laws were amended to increase the dues to \$8.00 in order to meet the assessment of the State Association.

W. J. PARKER, M.D., Secretary.

HENRY COUNTY MEDICAL SOCIETY

The Henry County Medical Society met at the Y. M. C. A., at 2 p. m., October 29. The meeting was held jointly with the medical societies of Cass, Vernon, Bates and Johnson Counties. Owing to inclement weather, the attendance was small.

The following members were present: Drs. N. I. Stebbins, G. S. Walker, W. E. Baggerly, S. A. Poague, J. R. Wallis, J. R. Hampton, J. J. Russell, Ed. C. Peelor, S. W. Woltzen and F. M. Douglass. The visitors were: Drs. J. T. Hornback and J. M. Yater, of Nevada, O. B. Hall and L. J. Scofield, of Warrensburg, Dr. R. J. Smith, of Appleton City, and Dr. T. A. Finley, of Rockville; and the clinicians, Drs. P. T. Bohan and F. N. Aschman, of Kansas City.

Dr. Aschman's subject, "Eclampsia," was very interesting, and his talk was thoroughly discussed by those present. He also presented a clinical case: A woman forty years of age, suffering from menorrhagia and secondary anemia. Although rather a stranger to the Henry County Society, Dr. Aschman made a very favorable impression on the members.

Dr. Bohan diagnosed quite a number of difficult cases, the most interesting being heart and goiter cases. All of these were handled in his usual able manner. Dr. Bohan is well and favorably known in Clinton.

The meeting adjourned, to be called at the will of the president.

ED. C. PEELOR, M.D., Secretary.

HOWARD COUNTY MEDICAL SOCIETY

On November 12, members of Howard County Society convened at Fayette for the purpose of reviving the activities of the organization. Dr. A. R. McComas, of Sturgeon, Councilor for the Ninth District, was present, and the following members attended the meeting: Drs. V. Q. Bonham, C. H. Lee, O. D. Clark, T. C. Richards, of Fayette; J. B. Fleet, G. D. Chamberlain, of New Franklin; C. H. Temple, of Glasgow.

Dr. McComas expressed his gratification that the members were anxious to renew the activities of their society and assured them of his full

cooperation. He reminded the members that a live society could not be maintained unless the members in the county took enough interest in the organization to attend the meetings regularly and present topics for discussion which would keep their interest alive not only in their county society meetings but in the progress of medical science and the public health activities of the county medical society. As councilor of the district, he said he was ready at all times to cooperate with them.

A general discussion of county society affairs followed Dr. McComas' talk, and the following officers were elected for 1926: President, C. H. Temple, Glasgow; vice president, G. L. Chamberlain, New Franklin; secretary-treasurer, O. D. Clark, Fayette; delegate to State Association, V. Q. Bonham, Fayette.

Dr. E. E. Evans will transfer his membership from Montgomery County. There are several other physicians in the county who are eligible to membership whom we expect to receive as members soon.

Meetings will be held in the afternoon of the first Wednesday of each month, and we are planning to maintain a very active county medical society and to cooperate in every way with the state medical society. Our society owes special thanks to Dr. V. Q. Bonham for his splendid efforts in renewing the activities of Howard County Medical Society.

O. DWIGHT CLARK, M.D., Secretary.

PEMISCOT COUNTY MEDICAL SOCIETY

The Pemiscot County Medical Society met November 10 in Caruthersville. After a very nice lunch was served, several good talks were made regarding the health of the community and county in general. Doctor Russell, of the State Board of Health, was present and read a paper on public health.

Doctor Russell's paper outlined the relation of the physician to the State Health Department and stressed the importance of physical examination of the apparently healthy. The doctor pointed out the fact that communicable diseases are on the decrease and preventive measures, such as vaccination against typhoid, smallpox, immunization with toxin antitoxin, correcting defects of childhood, tonsils, adenoids, etc., will be largely the work of the practitioner of the future. Rural sanitation is one of the outstanding needs of this county to bring up a better citizenship.

Doctor Petty, our county health officer, also gave a talk on the management of the health of the county in general.

A committee composed of Drs. Hudgings, Phipps, and Rhodes, was appointed to represent the Pemiscot County Medical Society and confer with Doctor Petty, the health officer, as regards the clinics, what clinics to hold and how first to hold them.

The following physicians were present: Drs. T. J. Collins, J. R. McDaniel, W. S. Petty, R. L. Russell, L. D. Denton, J. B. Luten, M. H. Hudgings, J. W. Rhodes, G. W. Phipps, W. R. Limbaugh, W. H. Denton, J. P. Vickrey, Warren Smith, and Speers.

The following dentists were also in attendance: Drs. C. F. Woods, G. C. Bishop, R. C. Cresswell, W. B. Garrett.

J. B. LUTEN, M.D., Secretary.

SCOTT COUNTY MEDICAL SOCIETY

Scott County Medical Society met in regular ses-

sion at Sikeston, Thursday afternoon, November 19. The following doctors were present: Cannon, Doggett, Ogilvie, Presnell, Rodes, Stewart, Yount, McClure, Haw, Mayfield, Daugherty, Stepp, and Burton. Dr. Mountain, of the State Health Department was also present and gave an excellent talk on public health.

The question of a full-time health officer and nurse for Scott County was discussed and laid on the table for further discussion at the next meeting.

An amendment to the county society by-laws was offered and read, raising dues from \$6.00 to \$9.00. This is to be acted on at the next meeting.

Five applications for membership were received and acted on. All applicants were elected to membership in the society.

The following resolution was adopted: "We, the Scott County Medical Society, resolve to go on record as indorsing the fight now being made by the State Board of Health in driving the diploma mills out of the state of Missouri and placing the medical profession of Missouri on the highest possible plane; we further indorse the fight made by Dr. North, the former president of the State Board of Health, and hope that the Board as now organized will carry on the fight."

The election of officers was the next order of business and the following officers were elected for 1926:

President, Dr. F. L. Ogilvie, Blodgett; vice president, Dr. J. H. Yount, Sikeston; secretary, Dr. Sylvester Doggett, Morley; censor for three years, Dr. G. S. Cannon, Fornfelt; delegate to State Meeting, Dr. U. P. Haw, Benton; alternate, Dr. G. S. Cannon.

The next meeting will be held in Benton in January.

SYLVESTER DOGGETT, M.D., Secretary.

ST. LOUIS COUNTY MEDICAL SOCIETY

The regular meeting of the St. Louis County Medical Society was called to order at 3 p. m., Wednesday, November 11, in the Directors' rooms of the Webster Groves Trust Company, Dr. Otto W. Koch presiding.

The following members were present: Drs. F. P. Knabb, M. Baker, A. W. Westrup, O. W. Koch, C. P. Dyer, G. Jones, H. Miles, J. A. Townsend, W. F. O'Malley, E. O. Breckenridge, H. N. Corley, F. C. E. Kuhlmann, L. W. Cape, and Dr. Quitman Newell, of St. Louis.

Dr. Carl C. Erick was unanimously elected to membership in the Society following favorable reports by Drs. Jones and Cape. The question of purchasing a Health Bond of the Tuberculosis Society at the sum of five dollars was brought up and passed upon. A motion was made and carried that transfer cards be issued to members living out of the county.

The by-laws were amended as follows: Chapter 5, Section 1: "The admission fee which must accompany the application shall be \$11.00, etc.," instead of \$8.00 as previously; and Section 2: "The annual dues shall be \$11.00, etc.," instead of \$8.00.

Dr. Quitman Newell, St. Louis, read a paper on the "Importance of a Gynecological Examination," which was very instructive and appreciated by everyone. A general discussion followed.

C. P. DYER, M.D., Secretary.

WRIGHT-DOUGLAS COUNTY MEDICAL SOCIETY

The Wright-Douglas County Medical Society met in Dr. Fuson's office at Mansfield, at 2:00 p. m., Wednesday, October 21, with the following members present: Drs. R. M. Rogers and J. A. Fuson,

of Mansfield; J. B. Little, of Norwood; A. C. Ames, of Mountain Grove; also Dr. James F. Cooper, of New York, representing the American Birth Control League.

The meeting was opened by Dr. Rogers, vice president, and the minutes of the last meeting were read and approved.

Dr. Cooper gave a very interesting address on birth control, showing how the population of all civilized countries is rapidly increasing, and at the present rate will soon reach the limit of possible existence, some countries having practically reached that limit already. He showed, moreover, how the greater part of this increase is among the less desirable classes, the ignorant, criminal, pauper and physical and mental defectives. He also called attention to the fact that many parents of these classes desire to limit the size of their families and he believed that they should be helped to do so, and he discussed various means used for that purpose.

This being the time for the annual election of officers, it was moved and carried to suspend the rules and re-elect the entire list, namely, E. C. Wittwer, president; R. M. Rogers, vice president; A. C. Ames, secretary and treasurer; B. E. Latimer, censor for three years; E. C. Wittwer, delegate, R. M. Rogers, alternate.

The matter of increasing the dues, on account of the increase in dues made at the last session of the State Medical Association, was then brought up and it was voted to make the dues of our county association nine dollars. All the members present paid that amount for 1926.

The meeting adjourned to meet at Mountain Grove the first Thursday in February.

A. C. AMES, M.D., Secretary.

WOMAN'S AUXILIARY

OFFICERS AND COMMITTEES

President, Mrs. M. P. Overholser, Harrisonville.
 Chairman of Organization, Mrs. Willard Bartlett, 53 Westmoreland Place, Saint Louis.
 Corresponding Secretary, Mrs. J. G. Montgomery, 524 Knickerbocker, Kansas City.
 Recording Secretary, Mrs. A. B. McGlothlan, 821 North 24th Street, St. Joseph.
 Treasurer, Mrs. C. T. Ryland, Lexington.
 Chairman of Legislation, Mrs. George E. Bellows, 3239 Euclid Avenue, Kansas City.
 Chairman of Finance, Mrs. John C. Parrish, Vandalia.
 Chairman of Education, Mrs. E. T. Gibson, 6425 Wornall Road, Kansas City.
 Education Subchairmen: Hygeia, Mrs. D. S. Long, Harrisonville; University Extension Service, Mrs. Guy L. Noyes, Columbia.

In another department in this issue will be found an admirable article by Judge X. Caverno, of New Madrid County, on the establishment and functioning of the Health Unit in that county. We commend this to every Medical Society and Auxiliary, as well as to every County Court in the state. Won't you supply your County Court with this article of Judge Caverno's and ask the Court's careful consideration?

HENRY COUNTY AUXILIARY

On Thursday, October 29, the Tri-County

Medical Society met at Clinton and at the same time the wives of the attending physicians met at the home of Dr. Robert D. Haire and organized the Henry County Woman's Auxiliary. The following officers were elected: President, Mrs. Robert D. Haire, Clinton; vice president, Mrs. J. R. Hampton, Shawnee Mound; secretary, Mrs. J. J. Russell, Deepwater; treasurer, Mrs. G. S. Walker, Clinton; chairman of education committee, Mrs. Tarr, Clinton.

INFORMATION CONCERNING THE STATE BOARD OF HEALTH

As an Auxiliary to a Medical Association we find we lack the information we think we should have regarding the Missouri State Board of Health and the Health Laws of the state. Therefore it seems advisable to our education and legislation chairman to place in this department from time to time information on these subjects that should be interesting to us as members of the Auxiliary and valuable to us as citizens.

This month the Chairman of Education commends the following facts regarding the State Board of Health to the attention of every County Auxiliary and hopes all will in some way incorporate the consideration of these facts in their regular programs.

Divisions of the State Board of Health: (1) Vital Statistics. (2) Communicable Diseases. (3) Child Hygiene. (4) Venereal Diseases. (5) Rural Sanitation. (6) Sanitary Engineering. (7) State Board of Health Laboratory.

Services of the State Board of Health of Missouri

1. Furnish a trained epidemiologist to assist local health authorities in the suppression of epidemics.
2. Maintain a public health laboratory at Jefferson City for examination of specimens.
3. Furnish free culture tubes, slides and sample containers (through deputy state health commissioners, or direct from laboratory).
4. Maintain a stock of biologics at Jefferson City for emergency distribution.
5. Furnish free salvarsan to physicians and local clinics for indigent venereal patients.
6. Maintain a special hospital at Rolla, in co-operation with the U. S. Public Health Service, for the treatment of the more severe types of trachoma (granulated eyelids).
7. Maintain a traveling field hospital unit to conduct clinics in various parts of the state for the treatment of the milder types of trachoma.
8. Investigate existing and proposed public water supplies and sewage disposal projects.
9. Investigate public milk supplies.
10. Promote sanitation of towns.
11. Promote sanitation of rural schools.
12. Secure the correction of public sanitation nuisances.
13. Assist in mosquito eradication.
14. Apply measures to prevent and suppress diseases of infancy and childhood.
15. Conduct physical examinations of school children.
16. Distribute literature on maternal and child care.
17. Promote the establishment and support of full-time county health departments and the employment of public health nurses.
18. Publish a monthly bulletin containing current public health information.

19. Publish periodicals on public health subjects.
 20. Furnish lectures and public health films for medical societies and community meetings.
 21. Compile permanent records of births and deaths.
 22. Study the prevalence of reportable diseases.
- Requests for any of the above services will be given prompt attention.

The following article on "Hygeia—The Magazine of Health," is copied from the *Bulletin* of the St. Louis Health Department. Members of the Auxiliary are urged to use the contents of this article in their subscription work for Hygeia. The article follows:

HYGEIA—THE MAGAZINE OF HEALTH

Everybody wants to enjoy good health! This *Bulletin* tries to publish information that is important for you to know but our resources are so limited that we can give you only a small number of articles each month. The newspapers, especially in their Sunday magazine sections, give several pages of articles on health, but their articles also are limited. As far as they go, the newspaper stories on health as published today are fairly accurate and contain reliable information.

There is one magazine now published, and has been appearing for the past two years, which devotes all of its pace to teaching people how to keep well, how to prevent disease, what to do when disease does attack, and that is the magazine *Hygeia*, published by the American Medical Association at Chicago, an organization not for profit, composed of 90,000 reputable, practicing physicians in the country.

All the articles in *Hygeia* are written by men and women who have had experience with the care and prevention of disease. There are articles on home life and how to make the home safe from disease invasion; articles on outdoor life and how to make outdoor life safe from attacks by disease; articles on industrial life and how to make factories, offices and business places of all kinds safe for the worker; articles on social problems and how to make the home of the poor and in the tenement districts safe for the health and strength of the ones who must live in those districts; articles on healthful beauty; articles on medical quacks who would take your money and give you no service in return that would preserve your health. In fact, *Hygeia* is a magazine for everybody who wants to learn how to get well, how to keep well and how to prevent disease from developing in his neighborhood.

Hygeia is a magazine of education, education on health principles and practice. It is widely used in schools, homes and offices where people want to know the best and latest theories in the great problem of preserving the health of the individual and of the community. It appeals to the child, to the young man and young woman, and to the grown-ups, for it contains timely articles every month that give information and instruction which interest and please all. You should have this magazine in your home. If you want to see it and learn more about it and its usefulness to you and yours, just address a postcard to *Hygeia*, 535 North Dearborn Street, Chicago, Illinois, and tell them to send you a sample copy, or address Mrs. D. S. Long, Harrisonville, Mo., State Chairman for *Hygeia*.

BOOK REVIEWS

THE BLOOD. A Guide to its Examination and to the Diagnosis and Treatment of its Diseases. By G. Lovell Gulland, M.A., B.Sc., M.D., F.R.C.P.E., and Alexander Goodall, M.D., F.R.C.P.E. With 29 text illustrations and 16 colored plates. Third edition. Edinburgh, W. Green & Son Limited, Publishers. New York Branch, E. B. Neal & Co., 45 E. 17th St., New York City. 1925. Price \$7.50.

The reviewer is particularly interested in the clinical aspects of hematology and can recommend this book to others like himself. The authors disclaim any intention "to make a final, erudite, and conclusive exposition of the subject," but they do "state their conclusions categorically." The student should be warned that conclusions that are categorically stated are not therefore irrevocably true. The authors have wisely discarded the primary and cryptogenetic view of pernicious anemia. They frankly state that if the cause can be found and removed the outlook is good. The grouping of the varieties of leukemia is confusing for one who was brought up in the school of Ehrlich and Naegeli. It is curious to read that Sellings had first observed that workers in benzol vapor suffered from anemia and leucopenia. Korangi has usually been given priority.

The illustrations and colored plates are good, the latter, however, somewhat too schematic. The authors express themselves clearly and concisely and the publishers have done good work.

L. S.

DISEASES OF THE NOSE, THROAT AND EAR. Medical and Surgical. By William L. Ballenger, M.D., Late Professor of Otology, Rhinology and Laryngology, College of Physicians and Surgeons, Department of Medicine, University of Illinois, Chicago. Revised by Howard C. Ballenger, M.D., formerly instructor of Otology, Rhinology and Laryngology, University of Illinois, School of Medicine and First Assistant Ear Surgeon, Illinois Charitable Eye and Ear Infirmary, Chicago. Fifth edition. Lea & Febiger. Philadelphia and New York. 1925. Price \$10.00.

In revising such a familiar and favorably known book Dr. Ballenger has accomplished a difficult task extremely well. While there have been no radical departures in the main structure of the text, enough clinical observations have been added to prove the author's ability to "carry on."

The literature has been well reviewed and deservicing material has been used freely without cluttering the already large volume with unused bibliography and references. The conservative attitude toward the surgical management of the infections within the nasal accessory sinuses is distinctly in keeping with the present trend. A clever scheme for the recognition of these conditions is illustrated by a diagram showing the "vicious circle" of the nose. All the modern surgical procedures are clearly described and their individual merits discussed.

Probably the most disappointing surgical procedure is the author's failure to recognize the marked advancement in mastoid surgery, i. e., the use of the wooden mallet and Alexander gouges. The old slow and difficult armamentarium of the curette and rongeur are still well illustrated.

A chapter on the nasal neuroses, i. e., hay fever, asthma, etc., is well written, but adds little aside from bulk to the book. Sluder's technique of removing the tonsils is given very deserving space and is well illustrated.

The progress which has been made in endoscopy by Jackson, Lynch, Killian, et al, is well presented.

Radium and X-ray are given their proper credit in the treatment of the malignant and nonmalignant neoplasms. That part dealing with the labyrinth and its functional tests is well illustrated by instructive colored diagrams. The usual sensible conservatism on the surgical treatment of the infections within the sigmoid sinus is greatly improved by clear cut colored plates.

The book should retain its old prestige as practical and useful to the specialist, medical student and general practitioner. O. J. D.

THE CEREBRO-SPINAL FLUID IN CLINICAL DIAGNOSIS.

By J. Godwin Greenfield, M.D., Pathologist to the National Hospital for the Paralyzed and Epileptic, and E. Arnold Carmichael, M.B., Ch.B., Resident Medical Officer, National Hospital for the Paralyzed and Epileptic. The Macmillan Company, New York.

Those of us whose shelves are littered with obsolete and redundant medical textbooks will at once be struck by the frankness of these authors, who state in their preface that the technic of certain tests is omitted because, "These methods vary from one laboratory to another and are constantly being improved and corrected, so that a full description of them in a book of this kind would be as out of place as it would soon be out of date."

It is indeed refreshing to find a book that aims at intelligent conciseness and at the same time adequately covers the subject as this one does. Anyone interested in the nature and composition of the cerebrospinal fluid, its changes in disease and the technic of its examination will not go wrong in purchasing this volume. R. L. T.

BATS, MOSQUITOES AND DOLLARS. By Chas. A. R. Campbell, M.D. 262 pages, with 60 illustrations, and a glossary of medical terms. The Stratford Co., Boston. Price \$3.00.

For more than two decades, Dr. C. A. R. Campbell, of San Antonio, Texas, has exhaustively studied the habits of the common house bat, *Nyctinomus Mexicanus*, especially in relationship to its favorite food supply, the mosquito. He has found that in many instances the little mammal practically subsists on mosquitoes. As a result of his suggestions, "bat roosts," private and municipal, have been erected in various parts of Texas. This method of mosquito eradication has proved both successful and practical. The late General Gorgas spoke highly of it.

All bats that are gregarious will live in a bat roost when once they find it and all newly constructed roosts are baited with a specially prepared (sexually scented) guano in order to attract future tenants.

The roosts are provided with hoppers in which the bat guano collects, to be removed later and used as fertilizer. This substance alone is of sufficient value to pay for the roost in the course of a few years.

The book contains a foreword by Dr. J. A. L. Waddell, the eminent engineer, who has observed

much of Dr. Campbell's work and seen the remarkable results obtained. The introduction is by Ernest Thompson Seton.

In addition to the section which deals with bats and their part in the solution of the mosquito problem, the volume contains interesting and stimulating chapters on splenic function and on variola. The book is one which will prove of value to every student of medicine. R. L. S.

MIDDLE AGE AND OLD AGE. By Leonard Williams, M.D. Oxford University Press. American Branch, 35 W. 32d St., New York City. Price \$3.25.

This is a most entertaining volume and worth reading by every practitioner of medicine as well as by others who are interested in the philosophy of growth.

In the preface Dr. Williams states: "During the period of my professional life the improvement of the public health has been steady and substantial. Successive ministries have vied with each other in the honorable task of educating local authorities and the public generally to their responsibilities in this matter, with results which are everywhere apparent in the lessening of epidemics and the elimination of microbic disease. In the matter of personal hygiene it is unfortunately far otherwise. The principles on which the habits and customs of the individual are based have suffered no changes, have certainly undergone no improvement in the last half century. Save, perhaps, in the matter of excessive alcohol, the generation which is now in the vigor of life commits the same indiscretions and improprieties and defends them with the same shibboleths that their grandfathers did, with the result that metabolic disease shows no diminution either in frequency or deadliness."

On pages six and seven he says: "The theories that the role of the physician is to enable society to sin without suffering still seem to rule even in the seats of scientific learning, and students are taught not how disease may be prevented and cured by rational dietetics, but how its symptoms may be relieved by synthetically prepared drugs."

Again on page thirty-nine he says: "A closer examination into the matter shows with one exception all the endocrin glands tend to diminish both anatomically and physiologically in these years. The one gland which usually shows a hypertrophy is the suprarenal."

Again on page sixty-seven he makes a statement which gives an idea of his thesis: "A side effect of this (the disuse of voluntary muscles in the expansion of the thorax) is the relegation of the respiratory efforts to the diaphragm, whose overaction tends to cause a descent of the abdominal viscera. The weakness of voluntary muscles in general leads to the exaggeration and fixation of normal resting posture, thus are caused dorsal excurvation, flat-foot, lateral curvature and knock-knee, which in their turn according to F. Wallis are important factors in the causation of piles. These mechanical troubles are thus directly due to the autointoxication to which stasis gives rise."

His book is written primarily for Englishmen, but its teachings can be used also by Americans. The book may be said to be another evidence of the growing tendency to utilize the advances of science in personal hygiene. Your reviewer would question some of the scientific data which the author uses, but in general the book is stimulating and, as has been said above, is well worth reading. G. H. H.

RECORD VISITING LIST FOR 1926. Wm. Wood & Company, New York. Price, \$2.00.

There are spaces for sixty patients a week in this compact pocket-size book. There are also numerous tables, notes and directions concerning matters of very great importance to the physician in his daily practice.

DIATHERMY. In The Treatment of Genito-Urinary Diseases with Especial Reference to Cancer. By Budd C. Corbus, M.D., F.A.C.S., Past Professor of Genito-Urinary Diseases in the University of Illinois College of Medicine, and Vincent J. O'Connor, S.B., M.D. Instructor in Genito-Urinary Diseases in the University of Illinois College of Medicine, Urological Surgeon to the Washington Boulevard Hospital of Chicago. With thirty-five illustrations. The Bruce Publishing Company, Saint Paul, Minn. 1925.

Diathermy is the application of the heat which is formed by the resistance of the body tissues to the electrical current. The authors first consider diathermy in a medical way. Heat from 100 to 122 degrees causes hyperemia. Hyperemia has analgesic, bactericidal, absorptive and nutritive effects. The first part of the book is taken up with a consideration of the above mentioned effects upon pathological conditions in the genito-urinary system.

Diathermy in a surgical way: More electricity means more resistance. More resistance means more heat. Heat from 122 to 150 degrees causes tissue destruction. It is the application of this heat as a destructive agent to benign and especially to cancerous growths in the genito-urinary system that the authors consider in the latter chapters.

The book contains about two hundred pages and is fully illustrated. C. C.

A MANUAL OF PHYSICAL DIAGNOSIS. By Austin Flint, M.D., LL.D., late professor of the Principles and Practice of Medicine and of Clinical Medicine in Bellevue Hospital Medical College, etc. Ninth edition. Revised by Henry C. Thacher, M.S., M.D., attending physician, Lincoln Hospital and assistant attending physician, Roosevelt Hospital, New York. Illustrated. Lea & Febiger. Philadelphia and New York. 1925. Price \$3.00.

The ninth edition of Flint's manual is a splendid summary of physical diagnosis. In these days, when many textbooks of physical diagnosis are filled with such a large amount of extraneous matter which belongs more properly in a textbook of medicine, it is a relief to pick up a manual of physical diagnosis which is really what its name implies. Flint's manual lays great stress on the physical basis of physical diagnosis and does not wander off constantly into all sorts of unnecessary discussions.

The following quotation from the preface of the ninth edition expresses very well the aim of this book: "Advancement in the laboratory side of diagnosis has in recent years discouraged the acquisition of that thoroughness and skill in the employment of simpler methods which were so essential to the earlier masters of clinical medicine. Even among instructors the disposition to subject every difficulty in diagnosis to the

Roentgen ray, electrocardiograph, etc., before the older methods of examination have been exhausted, is daily increasing. This tendency to adopt the dramatic and slight the direct use of his unaided senses doubly appeals to the student who fails to foresee how often in practice he will lack the advantages of such apparatus."

This manual can be unhesitatingly recommended to students and physicians. R. H. M.

PEDIATRICS FOR NURSES. By John C. Baldwin, M.D., Lecturer in Pediatrics, Johns Hopkins Hospital School for Nurses, etc. D. Appleton and Company, New York. 1924.

This is an excellent and valuable book and it is just a little unfortunate that the publishers selected such thick and stiff paper on which to print it, the leaves gaping awkwardly when it is opened and having a rigid, boardy feel.

A few comments may be made, none of them, however, detracting seriously from the book. For example, a scale or table of average weights and heights for reference would have been a practicable addition to the chapter on Growth. It was nice to read, in discussing the infant's toilet, that "the mouth should not be cleansed." The inadvisability of too much clothing in-doors in winter might have been mentioned and one might comment further that, in stating "breast milk is the only satisfactory substance on which to feed the premature baby," Dr. Baldwin fails to give credit to Dr. Marriott's high calory lactic milk feeding which has proven such a remarkable boon with us at the Children's Hospital in St. Louis. Nor are the advantages of lactic milk discussed nor the newer and better method of preparing it by the addition of lactic acid instead of lactic acid bacilli. The desirability of boiling milk for infants, as shown by Dr. Brennemann, quite aside from its sterilization, should certainly have been discussed.

The chapters on all subjects of interest to the nurse in the care of babies and children are clear, concise and to the point, without any disagreeable sense of brevity such as might almost be expected in condensing so vast a field as pediatrics and as would have occurred in less skillful hands. As stated, the book is really excellent. A. S. B.

RECOVERY RECORD. For Use in Tuberculosis. By Gerald B. Webb, M.D., Consulting Physician, Cragmor, Glockner, and Sunnyside Sanatoria, and Charles T. Ryder, M.D., Colorado School of Tuberculosis, Colorado Springs, Colo. Second edition, revised. Paul B. Hoeber, Inc., New York. 1925. Price \$2.00.

Although intended primarily for direction and instruction of the patient this record system has proven of great practical value to the physician in the conduct of his tuberculosis patients, as the reviewer can amply testify from personal experience with it. It so aids the physician in the instruction of his patients that the text, together with the charts, will effect not only a great saving of time and effort to both, but will tend to establish at once an entente cordiale between the two. Everything will run smoother, more intelligently, and more satisfactorily if this little book, within the reach of all, is used in the conduct of every case of tuberculosis, especially in the home.

The intelligent cooperation of the patient with the efforts of the physician is the basic essential

of successful physiotherapeutics. There are mutual responsibilities, but the greater burden and larger part must be borne by the patient and this book will prove a great help to him in this regard. It is, therefore, primarily designed for the patient's use and instruction, but it will also serve to concentrate the physician's mind on the value of the little things, the "imponderables," that spell success.

The text, although of only 79 pages, is adequately comprehensive, clearly understandable, charming in style, cogent and tactful. The importance of definite technique in the use of such essential therapeutic measures as rest, fresh air, dietetic regimens, is strongly stressed. The authors realize that these measures are definite therapeutic agents and prove worse than futile unless carried out with technical skill. Therefore, briefly but adequately, definite and proximate rules of guidance and methods of adaptation to the individual case are given, so that the full efficiency of these measures may be elicited and thus the technique of recovery easily and eagerly grasped.

The graphic chart, simply and easily kept by the patient, will tend to elicit his interest and cooperation. There are a sufficient number of these charts bound with the book and an integral and essential part of its scheme to last two months. They will immeasurably aid the physician in the conduct of the case and save an immense amount of time, because, at one glance, he is given adequate knowledge of what has occurred since his last visit; a sort of synopsis of the previous chapters of progress and relapse in the long serial story of chronic, active tuberculosis.

The charts are accompanied by quotations, each a lesson and food for thought, ranging from tragic Sophocles to erudite Minor. L. C. B.

THE CHEMICAL AND PHYSIOLOGICAL PROPERTIES OF THE INTERNAL SECRETIONS. By E. C. Dodds, Ph.D., B.Sc., M.B., B.S., Professor of Biochemistry in the University of London, and F. Dickens, M.A., Ph.D., Assistant in Biochemistry, Biochemical Department Bland-Sutton Institute of Pathology. Oxford University Press. American Branch, 35 W. 32d St., New York City. Price \$2.50.

This volume presents a concise statement of "the history, methods of preparation, and chemical and physiological properties of the internal secretions." Its chief value to medical science lies in the emphasis given to the methods of preparation and to the chemistry of the specific hormones. In fact the authors are to be congratulated on the thoroughness and yet, withal, terseness with which they have set forth these two themes. This analysis of the voluminous literature has long been needed by the student and clinician.

The six chapters of the book deal with the internal secretion of the pancreas, the pituitary body, the thyroid, the ovaries, the suprarenals and a group of internal secretions of lesser importance under the topic "miscellanea."

The authors, in very sane judgment we believe, emphasize the very recent epoch-making work on the ovarian follicular hormones of Allen and Doisy who in 1923 began the publication of a series of papers that not only opened new fields of research but promised to clarify the conflicting and confusing literature of the preceding decade. They state that Allen and Doisy obtained from follicular fluid (pig) a preparation of great purity

and of a potency that produced the phenomena of oestrus in test spayed rats in the minimal quantity of 0.13 milligram. Details of the preparation and of the method of testing ovarian extracts introduced by Stockard and Papanicolaou are given due credit. Other chapters, in particular the first chapter on the pancreas, are equally satisfactory in the emphasis on methods and chemistry.

The bibliography at the end of each chapter is representative and is complete through 1923, with many references into 1924. The older literature is not given exhaustively. The volume is concisely written and published with the usual care of the Oxford Press. C. W. G.

HAND-ATLAS OF CLINICAL ANATOMY. By A. D. Eycleshymer, B.S., Ph.D., M.D., Dean of College of Medicine and Director of Department of Anatomy, College of Medicine, University of Illinois; and Tom Jones, B.F.A., Director of Anatomical Illustration and Instructor in Anatomy, College of Medicine, University of Illinois. Illustrated with 395 line drawings, mostly in color. Lea & Febiger, Philadelphia and New York. 1925. Price \$11.00.

This new Atlas by Eycleshymer and Jones is a revised and completed edition of the "Manual of Surgical Anatomy" completed under the direction of the senior author to fill the needs of the Medical Corps during the World War. It has several outstanding features when compared to other anatomical works of this nature. In the first place it is compact, a single volume. The relation of deeper structures to surface anatomy is vividly portrayed by "transparencies and projections" which bring out the relations in a way more clearly retained in memory than detailed word descriptions. The illustrations of systematic and regional anatomy are further correlated in three dimensional pictures by the inclusion of typical cross sections. Students familiar with Eycleshymer and Schoemaker's "Cross Section Anatomy" can readily appreciate the value of the inclusion of this material. The anatomical needs of the surgeon are met by series of plates illustrating typical incisions at the more common sites of surgical attack. As a further valuable addition the illustrations are concisely described in a complete explanatory index.

In the reviewer's opinion this Atlas should be as useful to medical students as to clinicians. It is a book that will not quickly go out of date; a book that a student of medicine might well acquire during his first year of dissection and use for a reference throughout his medical course, internship and later practice.—E. A.

LES ARYTHMIES EN CLINIQUE. Par Antonin Clerc, Professeur agrégé à la Faculté de Médecin de l'Hôpital Lariboisière. Masson et Cie, éditeurs. Libraires de l'Académie de Médecin, 120 Boulevard Saint-Germain, Paris, VIe, France. 1925. Prix 34 fr.

This is a volume of 403 pages, illustrated by zinc plates and diagrams.

It begins with a discussion of the theory of cardiac action and the theory of the varied instrumentations now in use. Naturally the greatest attention is given to the electrocardiogram, and the work of Lewis is used as the basis. Because of this fact, one naturally feels that the work is simply a translation into French of findings that have originally appeared in English. But as is often the case, the study has gained in clarity by the passage through such secondary observers. G. H. H.

INDEX TO VOLUME XXII

A	PAGE
Abdomen, Acute Surgical Conditions of Upper, of Pancreatic Origin—Miller.....	347
Abdomen, The Acute Surgical—Hyndman.....	10
Acidophilus, Culture Bacillus—N. N. R.....	46
Alaya, P. Z.—Eclamptic and Nephritic Toxemias in Late Pregnancy.....	92
Amendments to Medical Law Introduced in General Assembly—Editorial.....	65
American Public Health Association—Editorial.....	439
American Urological Association Meeting in St. Louis—Editorial.....	319
Anal Pruritis, Unrecognized Clinical Importance of.....	16
Anesthesia, Ether—Waters.....	401
Annual Banquet of the Jackson County Medical Society—Editorial.....	184
Annual Meeting at Kansas City, The—Editorial.....	149
Annual Meeting of the St. Louis Pure Milk Commission—Special Article.....	107
Antidysenteric Serum—N. N. R.....	46
Antimony Sodium Thioglycollate—N. N. R.....	164
Antimony Thioglycollamide—N. N. R.....	164
Appendicitis, Chronic, Pericolic, Adhesions as a Factor in Diagnosis of—Shutt.....	249
Appendicitis Which Has Abscessed, The Technique of Abdominal Section for—Grinstead.....	361
B	
Baker, Governor, The Pitiabie Plight of—Editorial.....	364
Baker Stands for Quackery—Miscellany.....	409
Barbital-Merck—N. N. R.....	46
Baynham, Mary Robert, and Bertha K. Whipple—A Nutrition Problem With Special Reference to Negro Children.....	305
Benzyl Fumarate—Abbott, Tablets—N. N. R.....	124
Bess, W. E.—Infant Feeding.....	102
Bills in the Legislature, Status of—Editorial.....	110
Black, D. R.—Practical Points in the Management of Diabetes.....	125
Black, W. D.—Brain Abscess of Otitic Origin.....	218
Bladder and Prostrate, Management and Results of Deep Therapy in Tumors of the—Schnoebelen.....	57
Book Reviews—	PAGE
Abt, Isaac A.—Abt's Pediatrics. W. B. Saunders Co.....	44, 386
Alexander, John—The Surgery of Pulmonary Tuberculosis. Lea and Febiger.....	450
Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1924.....	289
Anspach, Brooke M.—Gynecology. J. B. Lippincott Co.....	290
Arey, Leslie Brainerd—Developmental Anatomy. W. B. Saunders Co.....	162
Aschoff, Ludwig—Lectures on Pathology. Paul B. Hoeber.....	43
Baldwin, John C.—Pediatrics for Nurses. Appleton & Co.....	489
Ballenger, William L.—Diseases of the Nose, Throat and Ear. Lea & Febiger.....	487
Beck, Carl—The Crippled Hand and Arm. J. B. Lippincott Co.....	291
Bertwistle, A. P.—A Descriptive Atlas of Radiographs of the Bones and Joints. Wm. Wood and Co.....	344

Book Reviews—	PAGE
Bickham, Warren Stone—Operative Surgery. W. B. Saunders Co.....	78, 162
Bodkin, Martin L.—Diseases of the Rectum and Pelvic Colon. E. B. Treat and Co.....	291
Boyd, Mark F.—Preventive Medicine. W. B. Saunders Co.....	450
Boyd, William—Surgical Pathology. W. B. Saunders Co.....	291
Boyle, Edmund G.—Practical Anesthetics. Oxford University Press.....	292
Broadhurst, Jean—Bacteria in Relation to Man. J. B. Lippincott Co.....	162
Brocq, L.—Cliniques Dermatologiques. Masson et Cie.....	122
Cabot, Richard C.—Differential Diagnosis. W. B. Saunders Co.....	78
Cammidge, P. J.—New Views on Diabetes Mellitus. Oxford University Press.....	161
Campbell, Chas. A. R.—Bats, Mosquitoes and Dollars. Stratford Co.....	488
Campbell, Dayton D.—Full Denture Prosthesis. C. V. Mosby Co.....	45
Cheinisse, Dr. L.—L' Année Therapeutique. Masson et Cie.....	416
Child Health Library. Edited by John C. Gebhart. Ten Volumes. R. K. Haas, Inc., New York.....	44
Chiray, M.—Diagnosis et Traitement des Maladies de la Vesicule Bilaire. Masson et Cie.....	447
Cleldening, Logan—Modern Methods of Treatment. C. V. Mosby Co.....	201
Clerc, Antonin—Les Arythmies en Clinique. Masson et Cie, Paris.....	490
Cooper, Eugenia R. A.—The Histology of the More Important Human Endocrine Organs at Various Ages. Oxford Press.....	489
Copher, Glover H.—Methods in Surgery.....	450
Corbus, Budd C.—Diathery. The Bruce Co.....	489
Flint, Austin—A Manual of Physical Diagnosis. Lea & Febiger.....	489
Crossen, Harry Sturgeon—Operative Gynecology. C. V. Mosby Co.....	386
Crummer, Leroy—Clinical Features of Heart Disease. Paul B. Hoeber.....	416
Cushney, Arthur R.—Textbook of Pharmacology and Therapeutics. Lea and Febiger.....	78
Davis, Gwilym G.—Applied Anatomy. J. B. Lippincott Co.....	163
Dercum, Francis X.—The Physiology of Mind. W. B. Saunders Co.....	291
Dodds, E. C.—The Chemical and Physiological Properties of the Internal Secretions. Oxford Press.....	490
Draper, George—Human Constitution. W. B. Saunders Co.....	123
Du Bois, Eugene F.—Basal Metabolism in Health and Disease. Lea and Febiger.....	43
Eggleston, Cary—Essentials of Prescription Writing. W. B. Saunders Co.....	78
Eycleshymer, A. D.—Hand Atlas of Clinical Anatomy. Lea & Febiger.....	490
Fairbairn, John S.—Gynecology With Obstetrics. Oxford University Press.....	344
Falk, Henry C. Operating Room Procedure. G. P. Putnam's Sons.....	448
Farr, Clifford Bailey—Outlines of Internal Medicine. Lea and Febiger.....	123

Book Reviews—	PAGE	Book Reviews—	PAGE
Feer, Prof. D. E.—The Diagnosis of Children's Diseases. J. B. Lippincott Co.....	385	Mackenzie, Sir James—Angina Pectoris. Oxford University Press.....	45
Fenwick, W. Solteau—Dyspepsia: Its Varieties and Treatment. W. B. Saunders Co..	290	Martel, Thierry de — Pseudo-Appendicitis. F. A. Davis Co.....	416
Fitzwilliams, Duncan C. L.—On the Breast. C. V. Mosby Co.....	202	Martinet, A.—Energetique Clinique. Masson et Cie.....	415
Foster, Nellie B.—The Examination of Patients. W. B. Saunders Co.....	44	Martinet, Alfred—Clinical Therapeutics. F. A. Davis Co.....	240
Friedenwald, Julius and John Ruhrah—Diet in Health and Disease. W. B. Saunders Co.....	447	Medical and Surgical Report of the Roosevelt Hospital, New York. Paul B. Hoeber, Inc.....	416
Graham, Evarts A.—Empyema Thoracis. C. V. Mosby Co.....	448	Metzger, John A.—Principles and Practice of X-Ray Technique for Diagnosis. C. V. Mosby Co.....	291
Graham, George—The Pathology and Treatment of Diabetes Mellitus. Hodder and Stoughton	164	Mix, Charles L.—The Practical Medicine Series. The Year Book Pub. Co.....	162
Greenfield, J. Godwin—The Cerebro Spinal Fluid in Clinical Diagnosis. Macmillan Co.	48	New and Non-Official Remedies, 1925. American Medical Association.....	289
Guillaume, Dr. A. C.—Vagotonies. Masson et Cie.....	447	Norris, Wm.—Diseases of the Chest. W. B. Saunders Co.....	122
Gullard, G. Lovell—The Blood. W. Green & Son	487	Nutt, John Joseph—Diseases and Deformities of the Foot. E. B. Treat and Co.....	386
Gurd, Fraser B.—Infection, Immunity and Inflammation. C. V. Mosby Co.....	344	Petty, Orlando H.—Diabetes. F. A. Davis Co.	45
Hamilton, Alice—Industrial Poisons in the United States. The Macmillan Company	449	Pierce, Bedford—Addresses to Mental Nurses. Bailliere, Tindall, and Cox.....	448
Hare, Hobart Amory—A Textbook of Practical Therapeutics. Lea and Febiger....	450	Practical Lectures. Paul B. Hoeber, Inc.....	292
Hays, Harold—Diseases of the Ear, Nose and Throat. F. A. Davis Co.....	416	Practical Medicine Series, The. The Year Book Pub. Co.....	162, 291, 292, 386
Hertzler, Arthur E.—The Technic of Local Anesthesia. C. V. Mosby Co.....	344	Pratt, Joseph H.—Physical Diagnosis of Diseases of the Chest. W. B. Saunders Co..	415
Hirst, John Cooke—A Manual of Obstetrics. W. B. Saunders Co.....	122	Radot, Dr. Pasteur Vallery—Oeuvres de Pasteur. Masson et Cie.....	415
Horsley, J. Shelton—Operative Surgery. C. V. Mosby Co.....	290	Rebman, F. J.—Psychopathia Sexualis. Physicians and Surgeons Book Co.....	292
Howell, William H.—A Textbook of Physiology for Medical Students and Physicians. W. B. Saunders Co.....	289	Robertson, John K.—X-Rays and X-Ray Apparatus. The Macmillan Company.....	45
Jordan, Alfred C.—Chronic Intestinal Stasis (Arbutnot Lane's Disease). Oxford University Press	202	Robertson, T. Brailsford—The Chemical Basis of Growth and Senescence. J. B. Lippincott Co.....	44
Jordan, Edwin O.—A Textbook of General Bacteriology. W. B. Saunders Co.....	450	Rockwood, Elbert W.—A Laboratory Manual of Physiological Chemistry. F. A. Davis Co.....	240
Kanavel, Allen B.—Infections of the Hand. Lea and Febiger.....	416	Roger, G. H., F. Widal, P. J. Teissier (Published under the direction of)—Nouveau Traite de Medecine. Masson et Cie.....	202, 240
Kaufmann, Dr. Eduard—Lehrbuch der Speziellen Pathologischen Anatomie. Walter de Gruyter and Co.....	288	Ross, T. A.—The Common Neuroses. Longmans, Green and Co.....	123
Kells, C. Edmund—The Dentist's Own Book. C. V. Mosby Co.....	292	Rovsing, Thorkild—Pathogenie des Calculs Biliares et Indications Operatoires. Masson et Cie.....	440
Kennedy, Alex. Mills—Parasitology. Oxford University Press.....	448	Sansum, W. D.—The Normal Diet. C. V. Mosby Co.....	450
Kerley, Charles G.—The Practice of Pediatrics. W. B. Saunders Co.....	163	Schweinitz, George E. de—Diseases of the Eye. W. B. Saunders Co.....	162
Kidd, Frank—Common Infections of the Female Urethra and Cervix. Oxford University Press.....	415	Sharp, Bernard—The Foundation of Health. Lea and Febiger.....	122
Kolmer, John A.—A Practical Textbook of Infection, Immunity and Biologic Therapy. W. B. Saunders Co.....	164	Smith, Richard M.—From Infancy to Childhood. The Atlantic Monthly Press.....	386
Kunstler, J.—La Matiere Vivante. Masson et Cie.....	292	Surgical Clinics of North America, The. W. B. Saunders Co.....	292, 385
Lang's German-English Dictionary of Terms Used in Medicine and the Allied Sciences. P. Blakiston's Son and Co.....	78	Turner, A. Logan—Diseases of the Nose, Throat and Ear. William Wood and Co.	201
Laroche, Guy—Opothérapie Endocrinienne. Masson et Cie.....	449	Turner, Clair E.—Personal and Community Hygiene. C. V. Mosby Co.....	409
Lutembacher, R.—Les Troubles Fonctionels du Coeur. Masson et Cie.....	121	Urbain, Achille—La Reaction de Fixation dans la Tuberculose. Masson et Cie....	344
Lyon, Gaston—Precis de Clinique Semiologique. Masson et Cie.....	164	Vaquez, Dr. Henri—Diseases of the Heart. W. B. Saunders Co.....	163
MacCallum, William G.—A Textbook of Pathology. W. B. Saunders Co.....	78	Walsh, James J.—Safeguarding Children's Nerves. J. B. Lippincott Co.....	121
		Webb, Gerald B.—Recovery Record. Paul B. Hoeber	489
		Wells, H. Gideon—The Chemical Aspects of Immunity. The Chemical Catalog Co... ..	292

Book Reviews—	PAGE
Williams, Leonard—Middle Age and Old Age. Oxford University Press.....	488
Wilson, Philip D.—Fractures and Dislocations. J. B. Lippincott Co.....	290
Books for Leisure Moments...30, 154, 233, 369, 442, 481	
Brady, Jules M.—Cisterna Puncture in Intracranial Hemorrhage of the Newborn.....	359
Brain Abscess of Otitic Origin—Black.....	218
Brooks, Barney and J. G. Probstein—Subungual Exostoses	211
Bulgarius, Bacillus—N. N. R.....	124

C

Carbon Tetrachloride—Merck—N. N. R.....	46
Carcinoma of the Penis—Carlisle.....	467
Carcinoma of the Spleen—Welch.....	399
Cargentos Ointment, 5 Per Cent.—N. N. R....	46
Carlisle, Jno. B.—Carcinoma of the Penis.....	467
Carson, Dr. Norman B., Banquet Given in Honor of, at the St. Louis Club—Special Article..	17
Cataract Extraction with a Round Pupil—Connell	247
Catholic Hospital Convention—Editorial.....	367
Caverno, Judge X.—History of the New Madrid County Health Unit	464
Chambers, J. G.—Intrathoracic Lesions Simulating Abdominal Conditions.....	353
Children's Diseases, Quartz Light in—Zahorsky	61
Christian Hospital in St. Louis, New—Editorial	226
Cinchophen—N. N. R.....	164
Cisterna Puncture in Intracranial Hemorrhage of the Newborn—Brady.....	359
Clark, W. A.—Medical Education, Medical Legislation and Medical Distribution.....	241
Clint, M. L.—A Lesson from the Cults.....	99
Conference of State Secretaries and Editors—Editorial	476
Connell, Evan S.—Cataract Extraction With a Round Pupil	247
Constitution and By-Laws of the Missouri State Medical Association.....	469
Corner Stone Laid for St. Louis Medical Society Building—Editorial	317
Corner Stone, Laying, of St. Louis Medical Society Building—Miscellany	326
Corpus Luteum—N. N. R.....	124
Correspondence—	
Letter, A Good.....	409
Russian Information Bureau in Washington	153
Costello, Jos. P.—Ether Injections in the Treatment of Whooping Cough.....	106
Costello, Jos. P.—Radiation of the Thymus in Infantile Eczema.....	398
Creatinine Test for Renal Function—Major....	54
Cults, A Lesson From the—Clint.....	99

D

Dental Infection and Systemic Disease—Haden	165
Diabetes, Practical Points in the Management of—Black	125
Diabetes, Use of a Meal Unit Diet in.....	315
Diagnosis, The, and Treatment of Sterility—Royston and Krebs.....	451
Digitalis, Tincture, Purified—N. N. R.....	164
Diphtheria Toxin Antitoxin Mixture—N. N. R..	124
Diphtheria Toxin—N. N. R.....	46
Diverticulitis of the Large Intestine—Larimore	129
Dixon, O. Jason—Streptococcic Laryngitis Simulating Clinical Diphtheria.....	14
Downey, Thomas B.—Significance of the Colloidal Properties of Gelatin in Special Diets.....	221
Dues, Increase in State Association—Editorial	404

E

PAGE

Eclamptic and Nephritic Toxemias in Late Pregnancy—Feist, Hyslop and Alava.....	92
Editorials—	
Adcox Confessions, The.....	478
Amendments to Medical Law Introduced in General Assembly.....	65
American Public Health Association.....	439
American Urological Association Meeting in St. Louis.....	319
Annual Banquet of the Jackson County Medical Society.....	184
Annual Meeting at Kansas City, The	149, 155, 195, 267
Baker, Governor, Appoints New State Board of Health	403
Baker, Governor, The Pitiable Plight of.....	364
Catholic Hospital Convention	367
Christian Hospital in St. Louis, New.....	226
Conference of State Secretaries and Editors..	476
Corner Stone Laid for St. Louis Medical Society Building.....	317
Diploma Mills, Attorney General Otto Sues to Close Medical.....	317
Erratum	404
Experiment, A Dangerous.....	111
Golf Tournament, The, at Kansas City.....	224
Graduate School of the St. Louis University	318
Ground Broken for New Building of St. Louis Medical Society.....	225
Health Program of the State Department of Public Schools	67
Health Service for St. Louis University Students	404
Honors for St. Louis Physicians.....	403
Hotels and Rates for Kansas City Meeting, May 5, 6, 7.....	149
Increase in State Association Dues.....	404
Kansas City Is Expecting You.....	183
Kansas City Meeting, The.....	110, 223
Koch Hospital for Tuberculous Patients.....	478
Kuhn, Dr. William F., Memorial to.....	439
Legislative Program.....	26
Leslie Dana Medal, The.....	227
License of Dr. Waldo Briggs Revoked—Two Other Physicians Surrender Their Licenses	148
Licenses Revoked by the State Board of Health. More	226
Massachusetts Will Make Sweeping Changes in Medical Law.....	28
Medical Bill Abandoned in the Legislature...	184
New Madrid County Health Unit.....	476
North, Dr. Emmett Pipkin, Our New President	259
Opportunities for Graduate Medical Study in New York	185
Optometrist Sues O. H. Gerry Optical Company	367
Otolaryngology, The American Board of....	28
Physical Education Finances.....	439
Preventing Chronic Disease.....	25
Public Health Education, First Meeting of Campaign for.....	316
Pulmonary Tuberculosis, History in the Diagnosis of.....	261
Radiology, One Hundred Thousand Dollar Department of, for City Hospital.....	27
Reasonable	439
Reduction of Excessive Tax on Physicians..	437
State Board of Health Cites 60 Physicians for Trial for Revocation of Licenses.....	112
State Board of Health Revokes More Licenses	183
Status of Bills in the Legislature.....	110

L	PAGE	Miscellany—	PAGE
Labor, Clinical Observations on the Use of Magnesium Sulphate With Morphine Hyoscine in—Paddock.....	214	Griffith, Jefferson Davis, M.D.—Hal Foster...	32
Lacto-Dextrin—N. N. R.....	46	Kuhn, William F., M.D.—Schauffler.....	31
Larimore, Joseph W.—Diverticulitis of the Large Intestine	129	Laying Corner Stone of St. Louis Medical Society Building.....	326
Legislative Program—Editorial.....	26	Registration of Physicians.....	409
Leslie Dana Medal, The—Editorial.....	227	Report Upon a Study of Medical Education and Medical Licensure in Missouri, October, 1923 to August, 1925—Waite.....	371
Letter, A Good—Correspondence.....	409	Wassermann, August von.....	233
Lewis, Bransford—Urologic Diagnosis for the General Practitioner.....	88	Miller, Edwin Lee—Acute Surgical Conditions of Upper Abdomen of Pancreatic Origin...	347
License of Dr. Waldo Briggs Revoked—Two Other Physicians Surrender Their Licenses—Editorial	148	Missouri State Board of Health Approved, Work of the—Editorial.....	184
Licenses Revoked by the State Board of Health, More—Editorial.....	226	Missouri State Medical Association, 68th Annual Session	155, 195, 267
Lissack, Edmund—Gynecological Backache....	303	Modern Developments in Medical Practice—Wolf	179
Lobar Pneumonia in Children, Intradermal Salt Solution Test in.....	258	Moore, Neil—Obstruction of the Upper Urinary Tract From a Surgical Standpoint.....	50
Lounsberry, Ray C.—The Treatment of Skin Cancer by Electro-Coagulation in Conjunction With Quartz Light Therapy.....	15	Moore, Sherwood—Traumatic Fractures of the Vertebral Column.....	417
Lyman, H. W.—Mastoiditis a Cause of Gastro-Intestinal Disturbances in Infants.....	293	Mosher, George Clark—The Method of Reducing Maternity Death-Rate in Missouri.....	133
Lyter, J. Curtis—The Upper Urinary Obstructions—Medical Aspects.....	47	Myers, F. Lee—Safety Pins in Food and Air Passages	96
M		N	
Magnesium-Sulphate With Morphine-Hyoscine in Labor, Clinical Observations—Paddock	214	Neorobin—N. N. R.....	124
Major, Ralph H.—The Creatinine Test for Renal Functions.....	54	Neurosyphilis, Tryparsamide Therapy in—Skoog	387
Manning, D. F.—Hemochromatosis.....	90	New and Non-Official Remedies.....	46, 124, 164
Mantoux Test, Intracutaneous Tuberculin for the—N. N. R.....	124	New Madrid County Health Unit, History of the—Caverno	464
Marchbanks, H. E.—Frequency of Insulin Dosage and Increased Threshold.....	434	News Notes	29, 68, 113, 150, 185, 227, 262, 320, 368, 405, 440, 479
Massage, Physiologic Effect of.....	182	Non-Tuberculous Hip of Early Life, The—Key	295, 429, 457
Mastoiditis a Cause of Gastro-Intestinal Disturbances in Infants—Lyman.....	293	North, Dr. Emmett Pipkin, Our New President—Editorial	259
Maternity Death-Rate in Missouri, The Method of Reducing the—Mosher.....	133	Nutrition Problem With Special Reference to Negro Children, A—Baynham-Whipple....	305
McMahon, Bernard J.—The Value of Endoscopy to the Internist.....	1	Nutrivoid Flour—N. N. R.....	46
Measles, The Symptomatology of, Modified by Late Serum Immunization.....	147	O	
Medical Bill Abandoned in the Legislature—Editorial	184	Obituary—	
Medical Diploma Mills, Attorney General Otto Sues to Close—Editorial.....	317	Anthony, Caruthers A., M.D.....	152, 188
Medical Education and Medical Licensure in Missouri, Report Upon a Study of Waite—Miscellany	371	Ballard, Emmett Starke, M.D.....	481
Medical Education, Medical Legislation and Medical Distribution—Clark.....	241	Bartlett, James R., M.D.....	117
Medical Law, Amendments to, Introduced in General Assembly—Editorial.....	65	Batdorf, F. P., M.D.....	324
Medical Law, Massachusetts Will Make Sweeping Changes in—Editorial.....	28	Birchett, John G., M.D.....	324
Medical Practice in the Early Days, Organization of the Southeast Missouri Medical Association and—Vinyard.....	140	Boemler, George, M.D.....	116
Medical Practice, Modern Developments in—Wolf	179	Bohannon, William T., M.D.....	151
Meningitis, Some Experiences With, and Description of a New Sign—White.....	59	Brunig, Frederick H., M.D.....	231
Mental Symptoms Following Head Injuries—Elliott.....	461	Burke, John Patrick, M.D.....	407
Mercurettes—N. N. R.....	164	Callison, Encinas C., M.D.....	441
Metabolism and Reflex Irritability in Anesthesia	24	Calnane, John A., M.D.....	117
Miscellany—		Carley, Harry Daigh, M.D.....	369
Baker Stands for Quackery.....	409	Chatham, Alford T., M.D.....	481
		Chowning, Thomas, M.D.....	408
		Clint, Morgan Leland, M.D.....	232
		Conaway, Robert Henry, M.D.....	153
		Curl, Armando C., M.D.....	369
		DeMenil, Henry N., M.D.....	115
		Dunnivant, Charles Anderson Pope, M.D.....	153, 188
		Florance, Thomas Skidmore, M.D.....	116
		Freyman, Amos A., M.D.....	152
		Gettys, Senter Lee, M.D.....	324
		Hall, John Randolph, M.D.....	266
		Happel, Horace Ellery, M.D.....	408
		Harrelson, Nathan O., M.D.....	323
		Hughes, Bondurant, M.D.....	116
		Keeble, Robert Roy, M.D.....	114
		Klein, Sebastian, M.D.....	369
		Kleissle, W. Benton, M.D.....	232

Society Proceedings—	PAGE
Henry County Medical Society.....	159, 413, 484
Holt County Medical Society.....	120
Howard County Medical Society.....	484
Howell-Oregon County Medical Society.....	77, 120, 159, 194
Jasper County Medical Society.....	384
Johnson County Medical Society.....	482
Kansas City Academy of Medicine.....	42
Laclede County Medical Society.....	194
Lawrence-Stone County Medical Society.....	42
Marion County Medical Society.....	75, 158, 384
Medical Society of Assistant Physicians of State Hospitals.....	343
Mercer County Medical Society.....	77
Miller County Medical Society.....	77
Mississippi County Medical Society.....	199, 285
Missouri Society of Medical Secretaries, 17th Annual Meeting.....	155, 195, 267
Missouri State Medical Association, 68th An- nual Session.....	236
New Madrid County Medical Society.....	236
Nodaway County Medical Society.....	343
Ozark County Medical Society.....	485
Pemiscott County Medical Society.....	120, 236
Pettis County Medical Society.....	35, 71, 117, 156, 190, 337, 381, 410
Proceedings of the Washington University Medical Society.....	77
Pulaski County Medical Society.....	42
Randolph County Medical Society.....	78
Ray County Medical Society.....	445
St. Francois County Medical Society.....	160, 237, 343, 413, 445, 485
St. Louis County Medical Society.....	238
St. Louis Medical Society.....	160
Schuyler County Medical Society.....	236, 413, 485
Scott County Medical Society.....	237, 444
Southeast Missouri Medical Association.....	121
Stoddard County Medical Society.....	238
Texas County Medical Society.....	43, 239
Vernon County Medical Society.....	121, 239, 414, 485
Wright-Douglas County Medical Society.....	33, 70, 328, 414, 445, 486
Woman's Auxiliary to the Missouri State Medical Association.....	140
Southeast Missouri Medical Association, Organi- zation of the, and Medical Practice in the Early Days—Vinyard.....	399
Spleen, Carcinoma of the—Welch.....	216
Sputum, The Importance of Repeated Examina- tions of the, and of the Use of the Anti- formin Method—Schlenker.....	107
St. Louis Pure Milk Commission, Annual Meet- ing of the—Special Article.....	112
State Board of Health Cites 60 Physicians for Trial for Revocation of Licenses—Editorial.....	403
State Board of Health, Governor Baker Ap- points New—Editorial.....	183
State Board of Health Revokes More Licenses— Editorial.....	425
Steinman Pin Traction for Fracture of the Leg—Rainey.....	451
Sterility, The Diagnosis and Treatment of— Royston and Krebs.....	150
Stewart, Dr. James, Secretary of State Board of Health—Editorial.....	14
Streptococcic Laryngitis Simulating Clinical Diphtheria—Dixon.....	181
Stryker, Garold V.—Late Cutaneous Syphilis in a Tabetic.....	211
Subungual Exostoses—Probstein—Brooks.....	351
Surgery of Acute Diseases of Hepatic Origin— Irland.....	345
Surgical Conditions, Acute, of Gastric Origin— Hertzler.....	

Surgical Conditions, Acute, of Upper Abdomen of Pancreatic Origin—Miller.....	PAGE
Sulpharsphenamin, The Chemotherapy of.....	347
Syphilis, Late Cutaneous in a Tabetic—Stryker..	24
	181
T	
Tetanus, The Treatment of—Ferris-Fuerth....	253
Tetrabromphenolphthalein - Mallinckrodt - N. N. R.....	124
Tetrabromphenolphthalein-Sodium—N. N. R....	46
The Adcox Confessions—Editorial.....	478
The New Madrid County Health Unit—Edi- torial.....	476
Thrombo-Angiitis Obliterans a Universal Dis- ease—Orr.....	174
Thyroid, Pertinent Facts About the—Reder....	208
Tilles, Randall S.—Essentials of a Gynecolog- ical Examination.....	203
Tooth Destruction in the Pregnant Woman and How to Control It—Kerwin.....	422
Traumatic Fat Necrosis.....	64
Traumatic Fractures of the Vertebral Column— Moore.....	417
Truth About Medicines, The.....	46, 124, 164
Tryparsamide Therapy in Neurosyphilis—Skoog	387
Tuberculosis, Changes in the Chest Wall in— German.....	395
Tuberculin in the Diagnosis of Tuberculosis— Editorial.....	437
Tuberculosis, Physical Examination in the Diag- nosis of—Editorial.....	366
Tularemia.....	258
Tumors of the Bladder and Prostate, Manage- ment and Results of Deep Therapy in— Schnoebelen.....	57
Twenty-Fourth Councilor District Meeting— Editorial.....	438
Tyree, James L.—Incidental Factors in the Diag- nosis and Treatment of Gastric Ulcer.....	356
U	
Ureteral Stone—Smith.....	79
Urethra, The Female—Young.....	169
Urinary Obstructions, The Upper—Lyter.....	47
Urinary Tract, Obstruction of the Upper, From a Surgical Standpoint—Moore.....	50
Urologic Diagnosis for the General Practi- tioner—Lewis.....	88
V	
Vernon County Health Week—Editorial.....	28
Vertebral Column, Traumatic Fractures of the—Moore.....	417
Vinyard, G. W.—Organization of the Southeast Missouri Association and Medical Practice in the Early Days.....	140
Vomiting, Simple Immediate Treatment for....	402
W	
Washington University, Society Proceedings of.....	35, 71, 117, 156, 190, 337, 381, 410
Wassermann and Kahn Tests, Comparative Study of the in 1400 Cases—Willett.....	177
Wassermann, August von—Miscellany.....	233
Waters, Ralph M.—Ether Anesthesia.....	401
Welch, Albert S.—Carcinoma of the Spleen....	399
Welch, Dr. J. Franklin, Death of—Editorial....	224
Whipple, Bertha K., and Mary Robert Bayn- ham—A Nutrition Problem With Special Reference to Negro Children.....	305

	PAGE		PAGE
White, T. Wistar—Some Experiences With Meningitis and Description of a New Sign	59	Woman's Auxiliary—	
Whooping Cough, Ether Injections in the Treatment of—Costello.....	106	Lafayette County Auxiliary.....	71
Willett, Joseph C.—Comparative Study of the Wassermann and Kahn Tests in 1400 Cases	177	Saline County Auxiliary.....	445
Wolf, I. J.—Modern Developments in Medical Practice	179	Scott County Auxiliary.....	71
Woman's Auxiliary—		Woman's Auxiliary to the Missouri Sta / Medi- cal Association.....	33, 70, 328, 414, 445
Benton County Auxiliary.....	35	Woolsey, Ross A.—The Inguinal Hernia.....	393
Butler County Auxiliary.....	445		
Buchanan County Auxiliary.....	70	Y	
Cass County Auxiliary.....	445	Young, H. McClure—The Female Urethra.....	169
Greene County Auxiliary.....	71		
Henry County Auxiliary.....	486	Z	
Information Concerning the State Board of Health	486	Zahorsky, John—Two Years' Practical Experi- ence With the Quartz Light in Children's Diseases	61
		Zinc Stearate Dusting Powders for Infants— Editorial	261

411
167

